

THE

Desert

MAGAZINE



AUGUST, 1939

25 CENTS

LETTERS

San Francisco, California

Dear Mr. Henderson:

The crayon sketch I am sending you is a copy of a photograph I took of the old Spanish church at Acoma many years ago. This building I understand was 40 years in construction and the materials were all brought up on the backs of the Indians from the plain 350 feet below.

I happened to visit there when the Indians were in the church decorating for Christmas festivities. As I entered the church I saw 12 paintings as large as a door. Eleven of them were in ruins from dew damp.

One of the paintings was in good condition. It represented a saint holding the infant Christ in his hands, painted by the old master Moro. Mr. Marmon who lived at Laguna, N. M., told me the picture was medicine to the Indians, and that during a war the Laguna tribesmen had stolen it away from the Acoma. Later the Acoma got it back again.

I wrote to the Smithsonian institution in Washington about the painting. They wrote me they knew all about it and the government would give \$40,000 for the painting. A few months later in St. Michaels where the Franciscan fathers lived they told me the painting belonged to the Catholic church. The last time I heard of the painting it had been destroyed by dampness, the same as the other 11 pictures.

E. A. BURBANK.

Mr. Burbank's sketch is reproduced on this page.

Rhyolite, Nevada

Dear Ed:

That feller Tom Worthington who wrote the answers to that examination quiz in your last copy may know his desert but he is plumb cuckoo when he says the Amargosa desert is in Calif. I've tramped that plateau from stem to stern—and most of the time I was in Nevada. California can claim one corner of the Amargosa if she wants to—but not the whole works. You boys are doin' a good job down there with your magazine and puttin' the Amargosa where it really belongs I got 18 of them answers right.

SHOSHONE GUS.

Colton, California

Dear Editor:

This morning out in my back yard I found a friend of mine dead.

Don't get excited (it was only a small cactus by the name of Cholla—introduced to me as Jumping Cholla.) This morning it did not look very much like a Jumping Cholla. Transplanted from the warm sunny atmosphere of his native home, he could not adjust himself to the cold wet lonely environment (apologies to the chamber of commerce).

For one who has lived on the desert and loved it, and often has that homesick feeling, I know where I would want to lay me down and sleep—and my friend Cholla shall rest in his native soil. Soon I shall make a trip to the desert for the purpose of returning him to his own.

And who knows? Perhaps my friend Cholla may grow roots and blossom out with flowers.

IDA MAY GRIFFITHS.



Old Spanish church at Acoma, New Mexico — Crayon sketch by E. A. Burbank.

Glendale, California

Dear Sir:

I herewith send my check for \$3.50 for Volume 1 of your magazine—to complete my file.

Later in the season when my long-suffering schnozzle is removed from the grindstone for a brief vacation I hope to visit you in your native ha'ts and tell you howdy. I might also take you to task for the mental anguish you cause me with your darned magazine — how the aitch can I get any work done when I think about the jaunts outlined by this Hilton person? Or what happens to my concentration when I consider these two guys Kelly and Korn reading up on the Manly party, and then going right to the one spot in all that wilderness and finding "H. W. B." carved on that rock? How can I give adequate attention to the problem in hand when I am trying to figure what a chuckawalla lizard lives on?

I could write three pages of this if I thought you could stand it.

DR. ROBERT R. ORR.

Long Beach, California

Dear Mr. Henderson:

I note in the July number of your excellent publication your request for proper spelling of the word KACHINA, so I am offering this information:

The Handbook of American Indians North of Mexico, (Bulletin 30), Bureau of American Ethnology, (the most authentic authority extant), says:

"KACHINA.—A term applied by the Hopi to supernatural beings impersonated by men wearing masks or by statuettes in imitation of of same."—Part I, p. 638.

Also:

"Dolls.—Among the Hopi these little figures are of soft cottonwood, so cut and painted as to indicate in miniature the elaborate head-dress, decorated face, body and clothing of those who represent Kachinas or impersonations of ancestral breath bodies or spirits of men. These dolls are not worshipped but are made by the priests in their kivas during the great spring ceremonies as presents for the little girls to whom they are presented on the morning of the last day of the festival by men personating Kachinas."

I was in charge of the Hopis ten years. Spent 35 years in the U. S. Indian service.

EDGAR K. MILLER.

Los Angeles, California

Dear Sir:

We enjoyed Desert Steve Ragsdale, in his article "My Friend the Tortoise," but were somewhat surprised when he dashed *damn* thus, *d—*. Or did you do it? Imagine a desert man going sissy to that extent.

NED MAUSTON.

Lemon Grove, Calif.

Dear Sir:

The Desert Quiz in the June issue certainly was a splendid test. Through a stroke of good luck my score was 18. Numbers five and 16 proved to be stumbling blocks. A great deal of credit is due the originator or originators of the Quiz. I hope you have other similar tests in the future.

FLETCHER A. CARR.

Congratulations, Mr. Carr, on your admission to the Royal Order of Sand Dune Sages. Only two other readers have equalled your score as far as we have learned.

— R. H.

Waban, Mass.

Dear Desert Magazine:

May I express to you the pleasure your Desert Magazine has given me. I am not a desert dweller, but let me assure you not even a desert veteran could enjoy the magazine more than I.

Last June in Los Angeles, stopping at the Figueroa hotel I "discovered" your magazine on the newsstand in the lobby. At once I knew I wanted to carry back with me that particular number. Then I conceived the idea of subscribing for it. It may have been an unusual request to make of a newsstand attendant in a hotel lobby, and there were no subscription blanks or official receipts. So I accepted the receipt the young lady wrote for me—and placed it in my purse with a wonderful sense of having done something that would make me quite content to leave Los Angeles and return to my home in the extreme east.

I like the poetry page. And would so much like true experiences of persons who are in any way connected with rattlesnakes, or any snake stories. I'm scared to death of them, but strange to say enjoy reading about them.

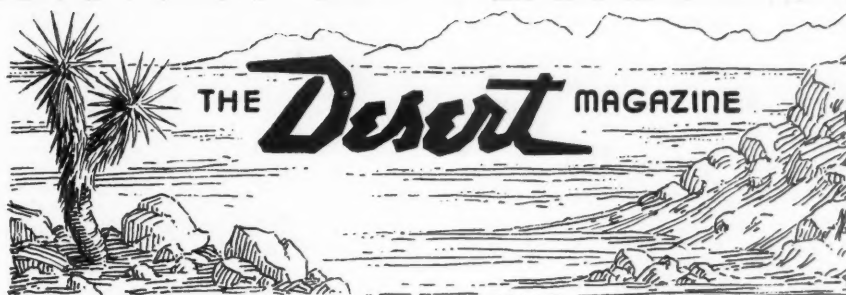
MRS. F. A. WOODMAN.

DESERT Calendar

AUGUST

- 2 to 16—Arizona landscapes, in oil, by Robert Atwood of Phoenix, exhibited at Museum of Northern Arizona, Flagstaff.
- 2 to 16—Exhibit of silver jewelry of Indian design at Museum of Northern Arizona, Flagstaff, by Julian Hayden of Phoenix.
- 4—Green Corn dance at Santo Domingo Pueblo in New Mexico.
- 4 to 6—Mormon lake rodeo in northern Arizona.
- 6—Annual Smoki snake dance given by the Smoki clan at Prescott, Arizona.
- 10—Horse show at Prescott, Arizona.
- 11 to 12—New Mexico Press association meets at Carlsbad.
- 11 to 13—Annual Long Valley, Arizona rodeo.
- 12-13—Annual Spanish trails fiesta at Durango, Colorado.
- 12-13—Annual New Mexico National guard horse show at Las Vegas.
- 17 to 20—Inter-Tribal Indian ceremonial program at Gallup, New Mexico. M. L. Woodward, secretary.
- 19 to Sept. 3—Water colors by Walton Blodgett on exhibit at Museum of Northern Arizona, Flagstaff.
- 20—"Trail Riders" annual trek into the high Sierra leaves Bishop, California. Thirteen-day saddle tour sponsored by American Forestry association.
- 23 to 25—Uintah Basin industrial convention and Indian fair at Fort Duchesne, Utah.
- 28—St. Augustine's Day observed annually by Indians at Isleta Pueblo, New Mexico.
- 28 to 31—Sixth annual metal mining convention and exposition of the American Mining congress at Salt Lake City.
- 31 to Sept. 2—Arizona department of the American legion holds annual convention at Tucson, Arizona.

Announcement of the Hopi snake dances held the latter part of August will be made about 10 days before the ceremonies are held.



Volume 2

AUGUST, 1939

Number 10

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RANDALL HENDERSON, Editor
TAZEWELL H. LAMB, Associate Editor

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Boulder Dam at Night

By JIM LEONARD

810 S. Flower St., Los Angeles, California
First prize winning picture in the June contest of the Desert Magazine. Taken with a 4x5 Speed Graphic, 60-second exposure, S. S. S. Agfa film.

Bells of San Xavier del Bac

(Tucson, Arizona)

By ALICE MARIE ROBERTS

5626 Aldama St., Los Angeles, California
Awarded second prize in the June contest of the Desert Magazine. Taken with a 2½x2¼ Automatic Rolleiflex, f11, 1/100 second at 10 a. m., light yellow filter, Agfa Superpan press film.

Special Merit Awards

Judges in the monthly photographic contest named the following entries as having exceptional quality:

"Sentinels of the Storm," by Vio Golvin, Los Angeles, California.

"Night Blooming Cereus," by Ivan B. Mardis, Tucson, Arizona.

"Zabriskie Point," by Fred Hankins, Taft, California.



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Thousands of prospectors have tramped over the barren Chocolate mountains in the Southern California desert during the past 75 years. They found a little placer gold, and that was all. Then two Imperial valley farmers came along this year and uncovered a ledge carrying values as high as \$5,000 to the ton. The new strike may be a million dollar mine—or just a rich pocket. No one knows yet. But after you read this story you will agree that the men who found the Mary lode deserve a rich reward.

They Found Gold -- the Hard Way

By RANDALL HENDERSON



Weston R. VanDerpoel (right) and his son Everett at the place where their new gold strike was made.

"We panned out a trace of gold down there in the wash near our camp and we just followed it up the canyon until we struck the ledge it came from."

Everett VanDerpoel was telling me about the new gold strike in the Chocolate mountains of Southern California. The discovery was made by Everett and his father, Weston R. VanDerpoel, early in April this year and today they are taking out ore that runs as high as \$5,000 in gold to the ton.

We were seated at the entrance to their

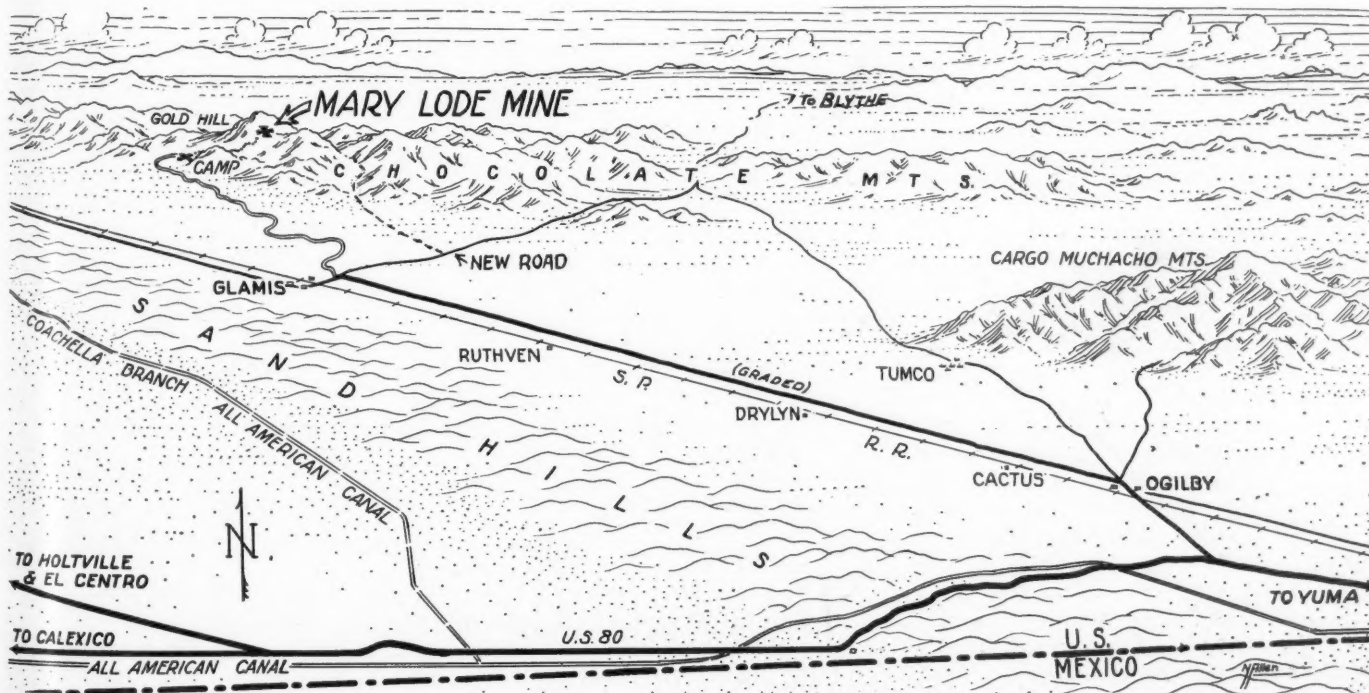
shallow mine tunnel high up on the side of a rugged peak that looks out over the Salton basin. The haze of a mid-June day shimmered over the sand dunes on the desert below us. The cultivated area of Imperial valley could be seen dimly way off to the southwest.

The story sounded very simple as Everett told it. Anyone ought to be able to find a gold mine by a method so logical. But it wasn't as easy as that. Otherwise the gold ledge would have been discovered long before now. Pauline Weaver prospected this country three-quarters of

a century ago. Peg-leg Smith came this way many times, and thousands of other gold-seekers have picked and panned in and around the Chocobates during the intervening years.

Rumors of the new gold strike had been so conflicting as to the value and extent of the ore body I wanted to go there and learn the facts for myself. Also, I wanted to shake hands with a prospector who actually had found a gold lode in the Chocolate mountains.

I have been in and out of the Chocobates for 27 years and I have known a



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score of veteran prospectors who have tramped these hills at one time or another in search of precious metal. In the bottom of my trunk are some beautifully engraved mining shares once sold to me by a promoter who assured me he and his associates had uncovered a rich vein of gold-bearing quartz in these mountains. It was a sucker investment.

Placer gold has been found at the eastern end of the range, yes, but in the entire 60-mile span of chocolate-colored hills that extend along the north side of the Salton basin from Glamis to Mecca, I never had heard of any one uncovering a lode claim worth the shoe leather it took to find it.

And so I drove out to see for myself. I found the mining camp 12 miles out of Glamis at the end of a jalopy trail that zig-zagged over the malpais and cross-washes without regard for the compass. It is a typical prospector's road—one of those 10-mile-an-hour thoroughfares. It merely follows the easiest cross-country route located by the VanDerpoels following their gold discovery.

I arrived at the camp some time after dark and found a dozen men lounging on cots spread over a narrow bench by the side of the arroyo in which the VanDerpoels found their first trace of placer gold. The mine is three-quarters of a mile back in the hills, reached by a foot

A three-quarter mile trail leads from camp up to the chocolate-colored ridge where the mine is located. Gold was discovered at the point marked by a black circle. High grade ore is being back-packed out of the mountains to supply funds for development of the property.

trail that climbs to an elevation of 500 feet above the camp.

The VanDerpoels and James Murphy were in the group. Murphy is a long time friend of the family and a partner in the mining venture. That evening in camp and during a visit to the mine the next day they told me their story—simply and unreservedly. There is nothing mysterious or glamorous about the tale as they recited it.

There are many ways of finding a gold mine. The VanDerpoels found theirs the hard way. There was no romance in the discovery of the Mary Lode—as they call their claim. They did not stumble across it while hunting for a lost burro, nor did they get their clue from nuggets deposited on the surface of the ground by industrious gophers.

There are 10,000 rocky gulches in the Chocolate mountains—more or less. It took 20 years for Weston VanDerpoel to find the right one. He trekked over the desert in an old jalopy that was somewhat

faster than a burro—but not as reliable.

He was prospecting in a country where waterholes are far apart. He worked at seasons when the sun was so hot it was necessary to wear cotton gloves to keep his hands from being blistered on the gold pan. The fiction writers make romance of prospecting—but for Weston VanDerpoel it was year after year of hard work and disappointments.

Sometimes he went alone and at other times he was accompanied by Everett or Jim Murphy. They followed the method of the practical miner rather than the engineer. Systematically they worked one wash after another with pick and pan. Somewhere near the mouth of an arroyo they would wash a few pans of gravel. If there was no surface showing of gold they would dig to bedrock and pan some more. That is the routine they have followed for years.

Early last spring they found a showing of color in the wash sand near where their present camp is located. Somewhere back in the hills that gold had weathered out of the mother lode. And so they worked up the canyon. Each tributary was panned for color—and one by one they were eliminated. The gold trail led them to the slopes of a rugged peak far back in the range.

There was no bright outcropping of quartz to give them a clue to the exact

location. The same weathered thousand range.

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location. The slope was covered with the same weathered brown stone found on a thousand other slopes in the Chocolate range.

It was a case of climb the steep sides of the hill and start digging in. An overburden of three feet of rock must be removed before they could get down to the formation where they might expect to find gold-bearing ore. They went at the job with the same dogged persistence with which they had panned gravel in countless washes below. It was slow hard work, but by a process of elimination they gradually closed in on the area where the gold should be.

Then late one afternoon just as they were about to start the long hike back to their base camp at the foot of the mountains Everett turned over a rock that looked promising. He broke it in two and it was flaked with tiny particles of gold.

That was the end of the 20-year trail for Weston VanDerpoel. "We knew it was good ore," said Everett, "and the assays were even better than we had expected."

Since the original discovery they have staked seven claims and named them the Mary Lode — honoring the wife and mother who remained at home on the ranch while Weston and Everett prospected the hills.

They may have a \$25,000 mine—or there may be a million beneath the surface where they are working or in the adjoining claims. Mining engineers have visited the property and have come away enthused over the ore that is being taken out—but no one can say yet how much of it is there.

Development work goes on despite the 118-degree midday temperature at this time of the year. Every morning before sunup a half-dozen men file out of camp and up the steep trail to the diggings. And every evening toward sundown these same men march back, each with a 75-pound sack of ore on his shoulder. Only the best rock is being packed out now — just enough to supply money for the development work.

Plans are being made for a new road which will enable trucks to go directly to the base of the slope where the mine is located. An ore chute will be installed on the mountainside and the back-packing days will be over.

"I don't know how rich our mine is," Everett said. "We've got a good prospect hole and that is about all. We've taken out ore that assayed \$4800 in gold and 157 ounces of silver—and some that didn't assay 48 cents. We packed 1900 pounds of it down from the mine on our backs and put it through a little two-stamp mill at San Diego and it yielded \$1200. There are 25 tons sacked up at the mine waiting for the building of the



Gold values of the rock in the tunnel are determined by the old mortar and pan method.

road. Some of it will run \$1,000 to the ton—some much less than that.

"So far, we have worked only at the original discovery, and the hole isn't deep enough to require a windlass. We've hardly done more than the necessary location work. We have traced the ledge along the side of the mountain for a distance of perhaps a hundred feet. At some points it is 18 inches wide — at other places it breaks up into a series of stringers. It may be a rich mine, or it may pinch out. We don't want to kid ourselves or anyone else about this mine."

The strike was made near the section line between sections 14 and 15, township 12 south, range 18 east, San Bernardino base and meridian.

The VanDerpoels have had little annoyance from the army of curious folks who usually rush to the scene of every new gold strike. One reason is the 12-mile trail across the humps and bumps between Glamis and the gold camp. It is no place for tenderfoot drivers. The other reason is that the south side of the Chocolate mountains in summertime is hotter than a ringside seat in hades.

Weston VanDerpoel is 68 years old—one of the pioneers of Imperial valley. He came to the desert in 1900 and took up an Imperial valley homestead. He leveled his claim and was waiting for water when the first irrigation canal was built from the Colorado river. He never studied mineralogy in the classrooms. But he liked the hills—his friends say

he would rather mine than farm. All of his spare time was spent in the arroyos and barren slopes of the ranges that enclose the Salton basin on three sides.

When Everett became 22—that was 10 years ago—he began going out with his father on prospecting trips—and together they followed the trail that led them to one of the most important strikes ever made on the Colorado desert—and the first discovery of a pay lode in the Chocolate mountains.

Everett divides his time between the mine and his watermelon field in Imperial valley. If the mine turns out well he will probably quit the melons after this year. He prefers to follow the gold trail in the desert hills.

Since the strike was made, Jim Murphy, who was taken into partnership after the discovery, has practically deserted his drive-in rootbeer stand in El Centro.

Jim prefers to remain in the background. "Weston and Everett found this claim," he said. "They worked hard for it and they deserve every dollar they can take out of those rocks—and also all the credit that goes with it."

I'll say this for the VanDerpoels and their Irish friend—they deserve to win. And if you want to know why I feel that way about it—just take your car one of these summer days and follow the trail out to that mining camp. Ol' Man Desert doesn't give up his treasures readily — and he demands an extra heavy penalty from those who would win gold from the Chocolate mountains.



This picture of the Hopi Snake Dance was taken 30 years ago, before the Indians put a ban on cameras.

Trail to Hopi Snake Dance

By MRS. WHITE MOUNTAIN SMITH

AT the head of one of the trails leading to the Hopi First mesa in northern Arizona, sunning her aged frame in the midday warmth of her doorway, sits Nampeyo, oldest woman in Walpi. There for almost a century she has watched the first red rays of day breaking in the east, and at sunset turned her eyes on the dying gleams in the western skies. No more can she see the golden sun, for the years have robbed her of vision, but she lives again her eventful life as she sits and dreams, turning sightless eyes ever toward the east.

I've spent many hours beside Nampeyo here in her doorway and in the courtyard where she mixed the clay and shaped the finest of all Hopi bowls and pots in the years before she lost her sight. She is the grand old lady who revived the art of pottery making among the Hopi and

Tewa women on the First Mesa. Every shred of legend and history of the Hopi people is known to her and it was from her I first learned the story of the huge rock down the trail halfway which bears rows and rows of straight lines chiseled deeply on its face. That is Tally Rock. And this is the tale she told me after a long silence while I waited and she made a journey into the past:

"Back in the years before any white people lived in this land, and only the Spaniards and priests came among the Indian people, the Hopi lived in the valleys and tilled their fields. Over on the Great River—the Rio Grande—my people, the Tewa Indians, had a village and made pottery and had fruitful fields. At least that is what is told from one father to another as the seasons go along. Then the Spaniards came and with them the

On the Hopi mesa at Walpi this year the Indians will hold another of those amazing ceremonials—the Snake Dance. Americans will go there and witness this weird ritual—and come away more puzzled than ever as to the strange magic which enables the Hopi Snake Priests to survive unharmed from the bite of venomous reptiles. Mrs. White Mountain Smith has lived with the Hopi and has many close personal friends among them. In the accompanying story she gives some intimate glimpses into the lives of these mysterious tribesmen—and also some helpful information for those who plan sooner or later to witness the Snake Dance.

priests who made our people worship a strange god and build big houses to him, and we were afraid of the Spaniards and did not like the new religion.

"These people also came among the Hopi and at the village of Awatobi they built a great mission and were very cruel to the Hopi people. Somehow the Hopi got rid of the intruders and then they were happy until the Utes and the Apaches and the Navajos began to harass them and steal their food and their families. They made slaves of the people they took from the Hopi country and were very cruel to them.

"The Hopi Indians have always been peaceful and they did not know how to fight the warlike tribes. So they moved high on this mesa here and because of the gap in the mesa they named their town Walpi—the Place of the Gap. They made

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no paths up to their houses but took long logs and notched them and these were lowered when the men wanted to go to and from the fields or when the women needed to carry water from the springs at the foot of the mesa. But always the Hopi were frightened and the ladders were not safe when one's hands were filled with food or fuel or water jars. So they sent messengers to our village on the Rio Grande and asked that my people come here and live. We were to guard the Hopi people from the warlike tribes who fought with them. The Hopi would give us a place to make our village and share all their land and crops with us. Because the Tewa people wanted to get away from the Spaniards they came and their town was built here at the head of the trail. The Hopi gave us land and springs to the eastward, and for hundreds of years the Tewa people have lived here and guarded the entrance to the Hopi towns. We are known as 'Keepers of the Trail.' "

"Well, tell me about the marks on the rock beside the trail."

"For years after my people came here the Utes and Apaches tried to climb up the trail in the darkness and steal food and wives from the Hopi. But the Tewa guards never slept. They always knew when strangers were near the mesa and all night they'd sit hunched behind a boulder waiting until a head would come in view. That was the end of the intruder. A swift blow from a stone ax and a dead



Nampeyo—in her doorway at the head of the Walpi trail. Mularkey photograph.

warrior lay in the trail forbidden to him. Each time such an Indian was killed the Tewa people made a mark on Tally Rock to show what they had done to protect their Hopi neighbors."

(I wondered if perhaps they did not over-emphasize their record as I've

counted the marks time and again and 180 dead are numbered!)

Nampeyo folded her hands in a complacent manner and ended her story with, "Even today no one can enter the Hopi towns without passing through the Tewa village of Hano. The white people who come up here to watch the Hopi dance with snakes have to pass by my doorway. We Tewas are indeed Keepers of the Trail!"

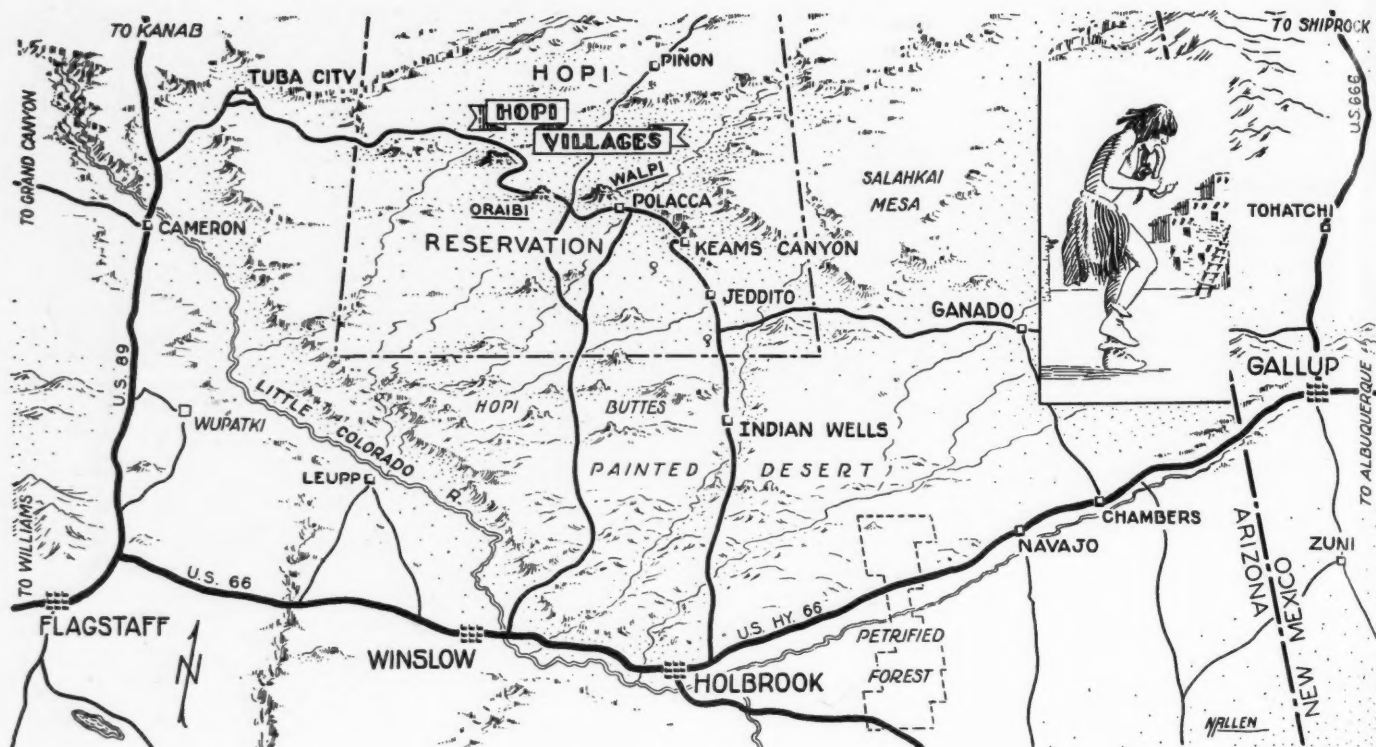
If you would see one of the most unbelievable sights to be found anywhere in the civilized world follow this trail of the Tally Rock up past Nampeyo's door and witness the Hopi Snake Dance.

There are three mesas on which the Hopi live, and snake dances are held on all of them. In the odd years Walpi stages her dance and here high above the gold and purple desert are gathered people from every section of the world. This age-old dance of the serpents is believed by the faithful to bring abundant rain to their fields and water to their springs. Nothing that has been printed or told can prepare the visitors for the pagan pageant of the Hopi Snake Dance at Walpi.

Ten days before, the dance date is made public and after that no one except members of the Snake Clan and the Antelope

Tally Rock — where the Tewa Indians kept score of the trespassers who died with cracked skulls. Mrs. White Mountain Smith, pictured beside the rock, has counted these tallies many times.





Clan is permitted to linger near the underground kivas, or club rooms, where secret ceremonies and preparations are in progress.

Four days before the dance, runners leave the mesa before dawn and spread out over the northern country in search of snakes; on the second day they hunt to the west, the third finds them scouring the south and their final hunt is in the east. They go, completely unclothed except for moccasins and G-string, armed with a short digging stick and a bag of sacred meal.

When a snake has been tracked to its hiding place under a sage bush or coiled round a bunch of grass it is sprinkled with the meal, then induced to try escape. Once in motion the rattler is touched lightly with a bunch of eagle feathers tied to a stick and then the catcher grabs his snake brother tightly with thumb and forefinger right behind the head. It is quickly dropped into a stout buffalo hide bag used for generations as a snake carrier. When the day's work is done the wriggling harvest is stored in big earthen ollas behind the ladder leading down into the kiva.

In the forenoon of the day set for the dance all snakes are tumbled out on the floor in a squirming mass of rattlers, bull snakes, whip snakes, red racers and king snakes, and with chanting and ceremony they are dipped into a jar of medicine prepared by the Snake Priestess. No one knows just what herbs and other ingredients go into this concoction, but it is

known that a great many big black beetles are brought up from the desert to give it a certain zip! After the rattlers are washed the non-poisonous snakes are given a bath and then they are tossed on the sand painting made of colored clays before the altar and herded back and forth over the painting until it is destroyed and they are dry. Small naked boys belonging to the clan take this task upon themselves and seem to enjoy it immensely, as they flip a savage old side winder back to his corner.

About an hour before sunset the snakes are put back into skin bags and carried out to the plaza where a cottonwood *kisi* has been erected just behind a symbolic entrance to the underworld where the water gods are assembled listening to this dance held in their honor. At sunset the Snake priests, barbaric and terrible in their painted nakedness, shell ornaments and fox skins, come into the plaza. After chants and more chants each dancer secures a snake between his teeth and circles the dance space with it four times. He opens his mouth and the snake drops to the earth sometimes seeking refuge among the inhospitable white visitors.

When all of something like a hundred snakes have been honored, they are gathered into a circle made of sacred meal and sprinkled with more meal by women members of the clan, after which the priests gather huge handfuls of them and run down the steep trails to the snake shrines in the desert. There they turn

their little brothers loose to carry prayers and thanks to underground gods.

There is a lot more to the Snake Dance but one needs to be there in person to get all the details. All roads lead to Hopiland in August. The safest and most practical are given on the map presented here. It is possible to leave U. S. Highway 66 at four points, Gallup being the eastern gateway and Flagstaff the western. More direct routes are from Winslow and Holbrook. A good reservation road running northward from Holbrook to Kean's canyon follows the base of the mesa 12 miles from there to Walpi. There are no real hazards in making the trip to the Hopi Snake Dance, provided one has a car in good repair, well greased, serviced and carrying a spare tire. Service stations are scarce in the Indian country.

A shovel is needed in case of sand across the road, and chains are imperative if there should be a sudden rain on the dirt highway. Rains do follow the Hopi Snake Dance, and don't let anybody tell you otherwise. Whether the priests are supreme weather prophets and know just when a storm is due, or whether they have a special brand of black magic all their own, still it rains after the Snake Dance.

Ordinary clothing is all right for the journey, with the addition of a sunshade for use during the hot sunny hours before the dance, and a raincoat to be worn on the way down the hill. Your car will be left at the foot of the mesa in a parking ground provided by the Indian service, and from there you walk up and admire the scenery or you ride on an Indian

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wagon drawn by two sleepy ponies. In that case you pay 50 cents for taxi service well worth it. You'll need your thermos jug of water up on the mesa. No drinking water is available there. Indian boys peddle soft drinks all day long.

Visitors should leave Holbrook around nine o'clock in the morning to make the 80-mile drive in comfort, have time for picnic lunch along the way under the piñon trees, and admire the flocks of Navajo sheep with their small brilliantly clad shepherd girls. The road leads through beautiful country with imposing buttes and soft painted desert background.

Indian Wells, half way to Keam's canyon, is one of the oldest trading posts in the country and the stock of Navajo rugs, jewelry and curios is authentic. Tom Pavatea, at the foot of the Hopi mesa, keeps unusual Indian treasures in the great rock store house over which he rules. Year after year this fine Hopi gentleman has greeted his friends here, and the Hopi baskets, pottery and kachinas have gone out wherever Indian goods are carried.

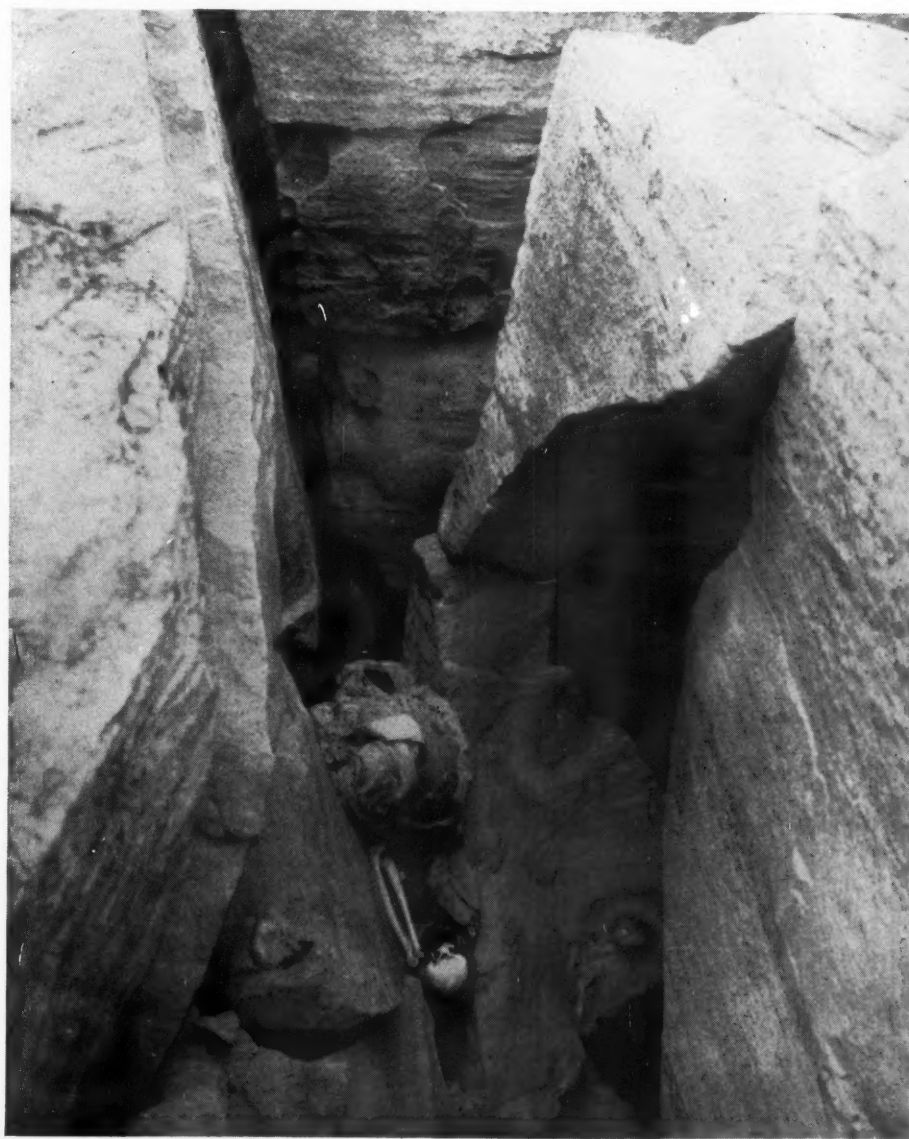
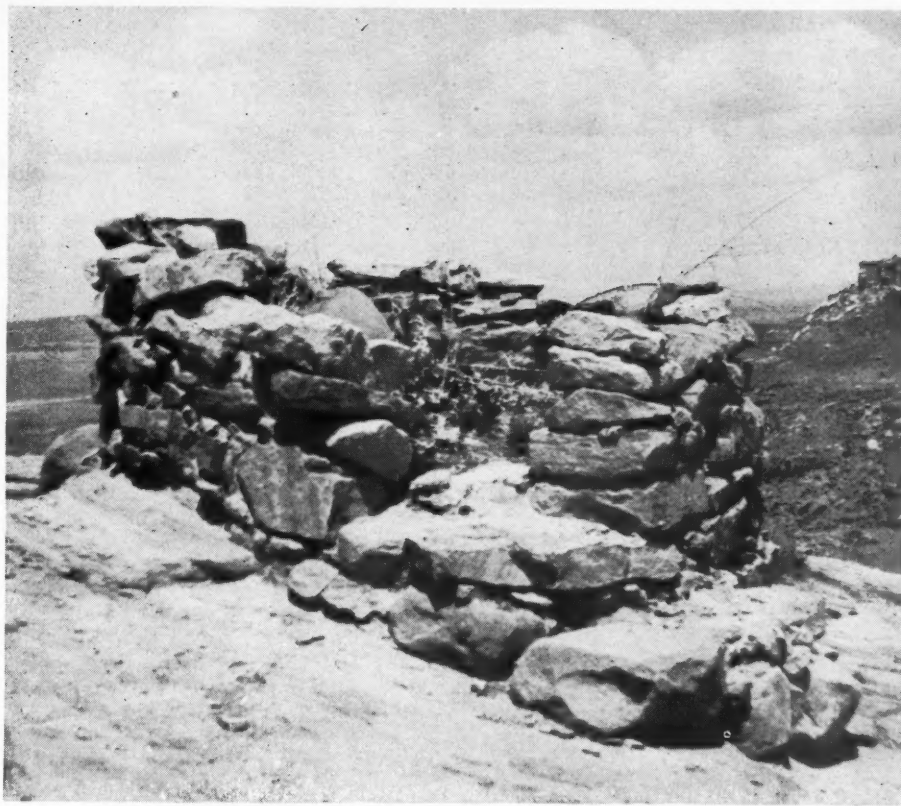
It is impossible for a visitor to the Hopi Snake Dance to photograph it and if you think you can outwit the Indians and get your kodak up on the mesa, think again. All one gains by such conduct is a hurried trip to the foot of the trail and loss of the kodak.

You'll probably go down the trail so fast after you try to take a forbidden picture that you'll miss seeing the Spider shrine, where the gap occurs which allows you to look northward a hundred miles or so. This shrine, made of stones laid smoothly in a square, is adorned with Hopi prayer sticks called *babos*, all trimmed with the down from an eagle's breast to waft them quickly to the spirits. Sea shells and favorite bits of petrified wood and turquoise are left at this shrine.

Where the gap breaks the trail there is a hidden path that leads to the other side of the ledge and that is a path many a heavy hearted mother treads with her dead baby wrapped in her arms. This is where little ones are placed in their rock crypts, crevices in the cliffs. The Hopi believe that the spirits of children are too weak to be placed underground so they are left here in the cliffs near their mothers' homes, and can wander around as they please. They often visit their houses and find the bits of corn meal and other titbits placed in out of way corners for them by their mothers. They really are homeless little waifs until the

Upper—Spider Shrine of the Hopi Indians.

Lower—Child burials were in the crevices in the rocks. Mularky photograph.





Pueblo of Walpi

mother gives birth to another baby and then the spirit of the dead baby enters the body of the newborn child and everybody is happy again. The dry air and hot sun at a 7000-foot elevation serve to mummify the small bodies there in the cliffs.

At the foot of the mesa is the sleeping place of the older Hopi. One of the most lavishly decorated graves is that of Harry Shupali, for many years Snake Priest at Walpi. The Snake Dance under his rule was a ceremony full of grimness and severity. The day he was buried thousands of dollars worth of turquoise jewelry was placed on his grave instead of flowers.

The Hopi Indians are kindly, smiling people and they welcome white people into their homes with the utmost graciousness. On the window ledges and doorstep are displayed their pottery and baskets and the hand carved gaily painted Hopi dolls or Kachinas. Hours of labor and skill go into the making of even a ten-cent ash tray offered by these women.

The Snake plaza is in the end village, Old Walpi, standing gaunt against the Arizona skyline. Perhaps 400 Indians live in this castle-like pueblo with its hidden rooms and outdoor pent houses. On the topmost floor one can likely find an aged crone baking the ceremonial bread—*piki*—for use in the feast to follow the dance. That is a sight worth seeking.

Seats on housetops around the Snake plaza are sold by the house owners for \$1 each. There is no argument about it. You pay the dollar and sit in safety above the ground over which the released snakes wiggle, or you can take your chance with the mob down around the Snake Rock.

No visitor has ever been bitten by a snake as far as the records show and chances are you won't be. But if you are timid about reptiles and hate to be jostled by Navajo, Zuni, Hopi and assorted tourists then give the housewife a dollar and enjoy the view from her front portico. The real dance lasts about 40 minutes, and there is time to be down off the mesa and safely in your car long before darkness covers the desert.

In many places in the Southwest the

SNAKE PRIESTS SET DATES

Dates for the annual Snake dances are determined by the Hopi Snake priests according to certain signs of the sun and moon. The time is not given out until ten days before the dances, but they always occur during the last half of August.

The dance is performed in five Hopi pueblos, each village holding one dance near sundown on the day fixed by the priests. Walpi and Mishongnovi hold the dance on odd years (this year), and on the even years it is at Hotevilla, Shimopovi and Shipaulavi. The dance is never held in more than one village on the same day.

When the dates are determined they are announced at sunset by village criers on the housetops.

native dances of the Indians have been commercialized for the benefit of both Indians and whites. The Hopi Snake dance, perhaps more than any other ceremonial among the tribesmen, remains a sacred ritual untouched by white influence. The Hopi does not care whether visitors come to his dance or not. However, if you go you will be treated respectfully as long as you observe the same rules of conduct that would apply if the Hopi were a guest at your house of worship.

Weather

MAY REPORT FROM U. S. BUREAU AT PHOENIX

Temperatures—	
Mean for month	85.9
Normal for June	84.5
High on June 12	109.0
Low on June 18	60.0
Rain—	
Total for month	00.0
Normal for June	0.07
Weather —	
Days clear	28
Days partly cloudy	2
Days cloudy	0

G. K. GREENING, Meteorologist.

FROM YUMA BUREAU

Temperatures—	
Mean for month	85.0
Normal for June	84.7
High on June 12	113.0
Low on June 6	58.0
Rain—	
Total for month	00.0
69-year average for June	0.02
Weather —	
Days clear	30
Days partly cloudy	0
Days cloudy	0
Sunshine, 425 hours of sunshine out of possible 428 hours.	
Colorado river—June discharge at Grand Canyon 1,660,000 acre feet. Discharge at Parker 588,000 acre feet. Estimated storage behind Boulder dam 24,350,000 acre feet.	

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In September, 1934, two months before he mysteriously dropped from sight in the desert wilderness of southeastern Utah, Everett Ruess wrote the following letter to his friend Ned Frisius. This letter, like those previously published in the *Desert Magazine*, gives new sidelights on the nomadic life of the young vagabond artist. The original story of Everett's disappearance, written by Hugh Lacy, appeared in the September, 1938, issue of this magazine.

I Drove Away Countless Hordes of Evil Spirits

By EVERETT RUESS

Illustration by G. A. RANDALL

Dear Ned:

I was surprised and pleased to find your letter at Grand Canyon the other day. I have spent the last week near Flagstaff vacationing. I left my burros, Cockleburrs and Chocolatero, under the care of an artist friend at Desert View, and took the highway down here to visit a friend with whom I did some archaeological work this summer. It was fascinating work—in ruins dating from eight hundred to fifteen hundred years back. And the climbing—up almost sheer sandstone cliffs, clinging by worn foot holds hundreds of years old, or on narrow crumbling edges—was more spectacular than anything in the Sierras.

From Flagstaff I went south to Oak creek, and painted some brilliantly lighted vermillion cliffs against inky storm skies. I came back and saw the first snows on the San Francisco peaks, and the slopes golden with yellowing aspens.

Evidently you overheard something of my adventure with my friends the Indians. I have a great time with them, especially the Navajos. I once spent three days far up a desert canyon, assisting and watching a Navajo "sing" for a sick woman. I drove away countless hordes

of evil spirits but after I went away the girl died. The sand paintings, seldom seen by white men, were gorgeous.

In my wanderings this year, I have taken more chances and had more and wilder adventures than ever before. And what magnificent country I have seen—wild, tremendous wasteland stretches, lost mesas, blue mountains rearing up-

ward from the vermillion sands of the desert, canyons five feet wide at the bottom and hundreds of feet deep, cloud-bursts roaring down unnamed canyons, and hundreds of houses of the cliff dwellers, abandoned a thousand years ago.

Glad you are getting a good start at college.

Your friend Everett.

EVERETT RUESS

By DAVID EARL MCDANIEL
San Jose, California

Some name him fool—but I don't know—
He said the sun and yucca's glow,
The feel of rising wind across the sands
Were gifts he sought from God's own
hands.

I watched him go, the shimmering haze
Absorb his form in the desert's maze.
Some call him fool—I think he knew
His trail but led to some rendezvous.





Domes and Onyx drapes near the entrance to the Queen's Chamber, Carlsbad caverns.

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Visitors who take the seven-mile hike along the underground trails in Carlsbad caverns experience strange reactions. For one thing, it deflates their egos—they come away with the realization that man, with all his genius, plays a rather insignificant role in the general scheme of the universe. Here is a report of a trip along the cavern trail by a woman who marveled at the fantastic beauty of the place—but found added interest in observing the actions and reactions of the humans she met along the way. If you are a student of human nature you will find this story especially interesting.

Underworld at Carlsbad

By LECIE McDONALD VIOLETT

Photos, U. S. park service

FOR the park rangers this was just another day — and another crowd. But for a majority of us who had come to this barren hillside in the desert region of southeastern New Mexico it was to be the day of our big adventure. We had come from 36 states and the Hawaiian islands to see Carlsbad caverns.

Busses and private cars had been arriving since dawn, and there was a waiting line in front of the ticket window as the hour approached for the start of the daily guide trip down into the world's most famous caves.

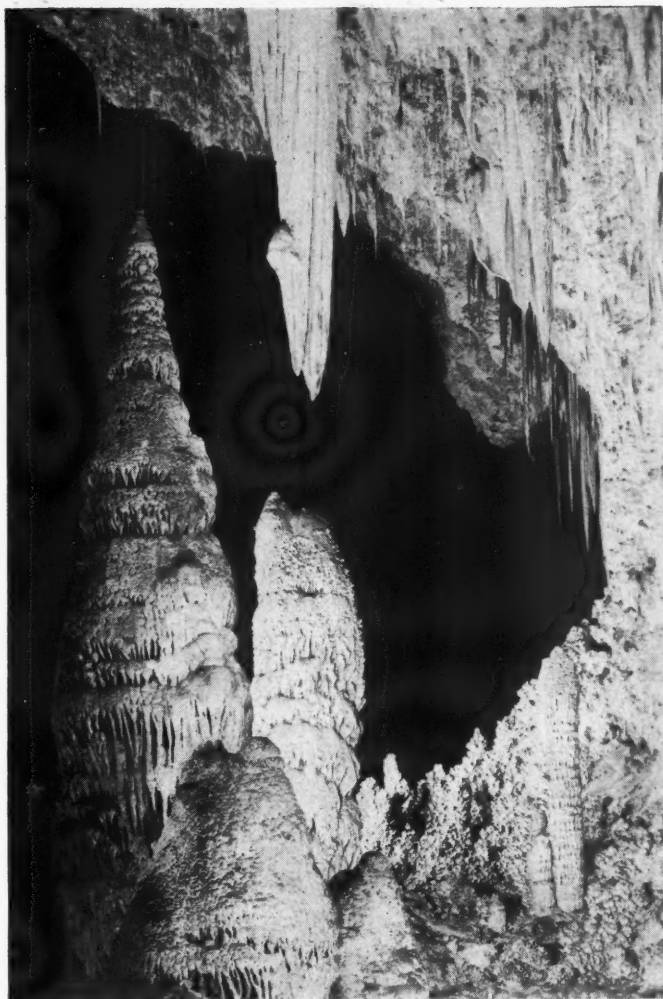
Officially, this place is named Carlsbad caverns national park. Owned and operated by the United States government and administered by the national park service, it is located in the Guadalupe mountains, the tapered end of the Rockies. The park reservation includes 49,448 acres of rugged hills and canyons with practically no grass or trees—just brown-gray slopes that bristle with cacti and thorny shrubs. The beauty of this area is not the landscape, but in the fantastic rock formations far beneath the surface of the ground.

The entrance in the side of a mountainous rock gloomed cool and inviting. It was a big hole—so big you could shove in a five-room cottage and still have room for the cat.

White government buildings, square, Spanish and thoroughly uninteresting, lay scattered over the hard hills. Their flat roofs merged into the horizon in straight unbroken lines. The mid-morning sun beat upon them in arid brilliance and upon us as we waited our turn for tickets.

A guide service fee of \$1.50 is made for each person above the age of 16 years, and although this revenue amounts to hundreds of thousands of dollars each year, it is nearly all spent in improvements, so that the Carlsbad cavern today is not only the world's largest and most beautiful cave, but it is also the best trailed and best lighted.

Ahead of me a youth blushing declared his wife under age. Folks under 17 may enter free. I mentally deplored my



Chinese Temple in Carlsbad caverns.

too obvious middle years. The young man's word went unquestioned. The cavern trip does something to a fellow's conscience. If he lies going in he's practically certain to pay coming out. Or mail it later.

The process of buying a ticket finished, I studied my tourist companions as they stood about awaiting the 10:30 starting signal.

There was a blond couple who would make their own sandwiches. She carried a double-wrapped-in-wax-paper loaf and he carried the boloney and the blond youngster. A smartly tailored New Yorker wore flaming lip rouge and a properly bored manner. A high school youth was coolly superior to "this sort of thing" and to his parents who strove to please and to educate, regardless.

Khaki-clad rangers with strained patience, considering that this was their job—and they had a job—answered funny questions. They said yes the elevator recently installed at a cost of \$126,000 was entirely safe. It costs 50 cents each way and is for the convenience of the aged, decrepit and folks with hurty feet.

We wore comfortable shoes and light weight coats or sweaters. We were going to *walk* seven miles. Not too excited over the prospect of that walk I fell in behind the blond family with the bread and followed the winding path downward toward the mouth of the cave.

And then I stopped. My calm gave a kind of inward gasp and slipped away. Before I regained my customary composure I was to know thrills, to grow dizzy and dazed and finally to experience a spiritual uplift unlike anything I'd ever known.

I knew there was a crowd but such a great number was

breath taking. There on the paths that spiraled into grey depths stood hundreds! Six hundred and eighteen to be exact. Those farthest down were so far away they looked little! They stood quietly, almost reverently and there was a Sunday solemnity in the way the cavern walls gave back their hushed voices.

I hurried down into their midst. A sudden shrill whistle froze us to silence, then the head ranger, so far down he seemed no bigger than a boy scout, stepped out from the crowd and began to speak:

"You are about to enter the world's largest known caverns. Although 30 miles have been explored, their extent is as yet unknown. They lie on three levels in endless reaches, the great mystery of the ages." There was to be no loud talking and laughter, no loitering and we were to keep close together. He carried the longest flashlight I ever saw but it made a comforting headlight before us as he swung out into mysterious darkness. We wound down, down, down.

There were rangers behind, pushing, sort of, and rangers hurried back and forth keeping us on the right of way. We went past a sign that said "Bat cave." I'd hoped a ranger would flash a light in on the bats and show us two or three millions hanging head down by their toenails. But their cave was five miles back and there was practically no chance to wander off on side trips—

We went through a narrow passage and then out into a great open space. It was the biggest place I was ever in except outdoors! The reddish brown sides of the cavern closed down in the distance so far away it was kind of like a horizon.

Huge boulders projected over us and rose beside our path. Above us reddish brown swords and needles hung from a reddish brown rocky "ceiling" which was pinch hitting beau-

tifully as a sky. I toyed with the idea of a ladder that would reach up there. Suppose a workman had to go up to fix a stalactite. But it was no good. Might as well think of an electrician climbing up some night to work on a star. The place had everything—hills, valleys, a sky!

It was so staggering I got bothered and dizzy. But other folks were struggling, too. A man behind me said, "There ain't no hole as big as this on earth and if there is I ain't in it."

The crowd swept me along and we must have climbed a hill. Anyway when I came out of the daze we were starting down a steep hill. Daylight had been left behind and now we walked by dim reflected glow from hidden light globes.

Folks were exclaiming, "See the seal!" and, "Look, there's a whale!" The whale's mouth gaped wide and there were creamy stalactites that seemed trying to be teeth. A boy declared they looked like strips of dried codfish.

Now don't misunderstand me. There's nothing artificial in the caverns except the lights which a government artist in shadow effects placed carefully and prayerfully lest they detract from the beauty already created. Government men feel such awe and wonder in the place it's said they work always under a strain. And none would have dared use a chisel to help nature along!

I was conscious of the echo of many voices and the tramp, tramp of many feet on the spiraling rock-bordered path and it was rhythmic like the roar of a train. So many people winding, walking down below me. I looked back and there were as many behind winding and walking and still pouring in from behind a great rock at the top of the hill!

Looking backward was a mistake. It made me dizzier than ever. I had to concentrate on walking. Have you ever seen 600



Hikers in the Carlsbad caverns stop at the underground lunch stand maintained by the park service.

people on the earth.

There the man told his oldish wife. She

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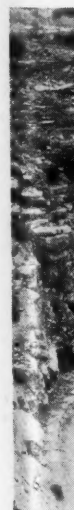
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people on one hill? And this, remember, was down inside the earth. Even if you don't care much for rocks—

There were eleven Hawaiians in that day's crowd. Perhaps the man in tropical white just ahead was one of them. He told his companion of his world travels, even adventures. An oldish woman behind complained about her heart and her feet. She hadn't wanted to come anyway.

More than a million and a half hearts have survived the caverns trip. Probably a third were owned by folks who confidently expected to die some day of heart trouble. Physically we react to great depths somewhat as we do to great heights and a certain amount of common sense preparation should be made for this unusual journey.

A nurse accompanies every crowd to give first aid when necessary but her services are not often needed. The authorities regard it as a good omen that few accidents have occurred and none of a serious nature. Once a man 100 years old made the trip with no ill effects.

The formidable wooden steps that confronted early cavern visitors were pulled up when the government took over under the Calvin Coolidge administration. Easy spiraling trails were built then. You can walk two or three abreast.

But to get back to the hill and all those people—the first walkers finally reached bottom, piled up and became a crowd. This is the first stop and is 200 feet below the earth's surface.

The chief ranger stood on a path a little above the crowd, his figure in dim outline against the great rocky background. The chin strap on his broad hat looked choky and his flashlight jiggled a yellow spot about his feet, as if he were under a strain too. (It's said they never get over it.) When all were within hearing he attempted to explain the caverns.

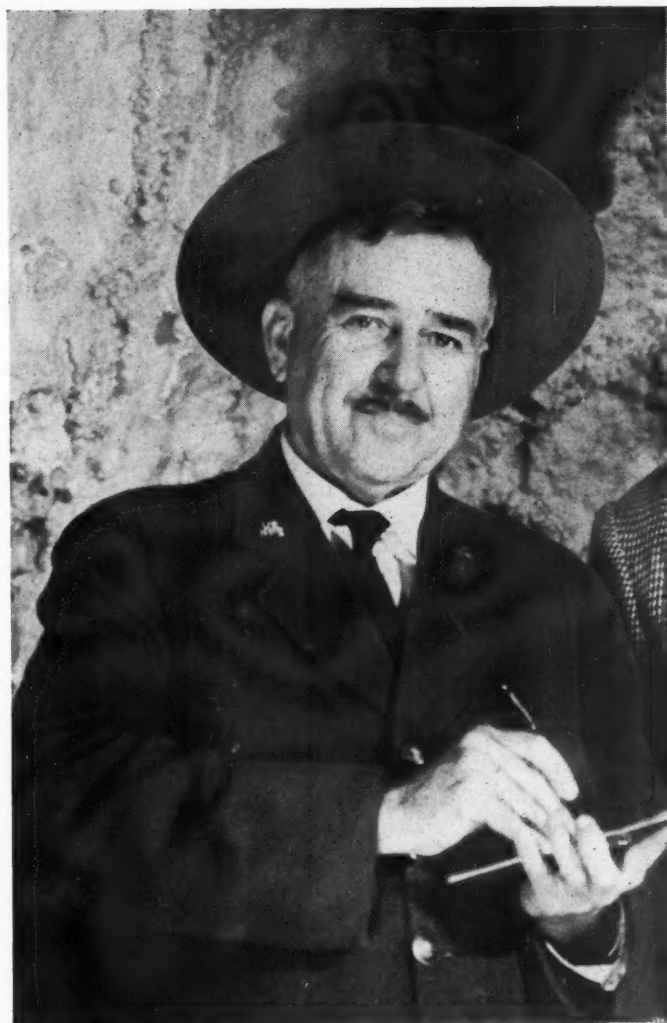
They are under the mountain known thereabouts as Carlsbad limestone. Limestone, it seems is soluble and when water touches it almost anything can happen, and did. As it evaporated it left the limestone crystalized in figures fantastic, weird and indescribably beautiful. It had taken 200 million years of drip, drip and evaporation to make the caverns as they are now.

It wasn't very satisfactory—what he said—for he didn't explain the something that in so many cases gave the rock definite form as evaporation took place. A chandelier, a shrine, a bath tub, a pipe organ—there were too many of them for it to be mere coincidence. Neither is it anybody's imagination.

I had been tagging along with a family from El Paso,



Entrance to Carlsbad caverns



Col. Thomas Boles, superintendent of Carlsbad caverns national park.

Texas, who were on their fourth trip through. When the ranger finished the El Paso man said in an undertone, "Shucks, I can beat that. This is the place where the Scotchman lost his dollar." A very fat girl in a huge blue polka dot dress giggled that he'd left no stone unturned, and the blond woman dropped her bread.

We went on to scenes of incredible beauty. The ceiling was now creamy white and came down lower and the chambers were smaller and more like rooms. And all the hanging formations and those on the floor were like alabaster.

In the Queen's chamber more than 800 feet below the surface the formations suggest the feminine. Great curtains drop in folds and you want to touch them to make sure they're not velvet instead of stone. There is lace and intricate basket weave. A stalagmite had become a drinking fountain, all except the water.

Outside the King's palace I saw a garden of flowers frozen in stone, pools with stone lily pads, Indian shrines and totem poles. I caught only glimpses as I was hustled along. We had to move on schedule. We were a train of people due at certain points at specified time. So we did the best we could with only one pair of eyes. People who live in the region visit the caverns again and again, some as many as 12 and 15 times. Even they have never seen the half.

We had 45 minutes for lunch. This is not a money making enterprise. There are no concessions along the route. The commercial just doesn't belong in the caverns. We were

served quickly and quietly. Many people carried their own lunch and bought coffee.

In the afternoon we went into the Big Room. This cozy little place is 4000 feet long and 625 feet wide. The scenes along the trail are about to be inadequately described. (The right words have not been coined.)

The ceiling 350 feet above—in places—was reddish brown. Some of the formations were that color but mostly they were creamy white and they rose from the floor to staggering heights. All the world's wonders were reproduced. There were the Leaning Tower of Pisa, the Chinese Temple, Colorado's Garden of the Gods. The trail wound through small canyons and beside upturned rocks, jagged and rugged, for all the world like a range of Rockies in miniature, only not too miniature.

The trip through the Big Room is one of rising drama. At each turn on the trail you come upon new vistas of grandeur and airy fantasy, each more amazing than the one before. The crowd grew more quiet and you could hear the breathless "ohs" from the startled folks nearest you.

The air was pure as on a mountain top, although a cloud of tobacco smoke moved along over the crowd ahead. I saw white fleecy clouds reflected in the shallow pools of water along the route. I finally stepped out of line to take a better look. Sure enough, there they were, not only clouds but a blue sky reflected, such as you see in pools on top of the earth in Illinois, New York and Texas. Finally I grabbed a passing man by the sleeve. I said, "Mister, are those clouds, or am I seeing things?"

He had a dark solemn look. He looked down, then up at the dark rocky ceiling, "Well, I swan," he drawled, "Not a cloud in sight. Just a clear day. Pretty soon we'll be seeing stars."

We walked on together for a little way. He discovered the head of a Scottie and I saw a perfectly formed bear. Somebody else saw the face of Herbert Hoover "just as plain as life."

My companion-of-the-moment seemed to be a college man. He talked about evolution and said there was plenty in the caverns to support the theory for even the most ardent believers had found it difficult to believe that a rock had mind in it. He said rocks, you could see, had ambition. "They want to make something of themselves. Give them TIME. Two hundred million years and they can become very successful."

A Reverend Somebody behind told his companion there was a place in the Bible where it's recorded, "And the very rocks cried out." Seemed to him that was what these were doing.

At about two o'clock in the afternoon, nearly five hours after we entered the cavern, we reached a crescent shaped slope on one side of the Big Room and were seated on rugged stone seats facing a golden hued stalagmite probably 30 or 40 feet high.

Colonel Thomas Boles, superintendent of the park, stood on the trail beside the formation and talked to us. Some of the formations are ten thousand times older than the pyramids of Egypt, he said, and then called special attention to the formation by which he was standing. On account of its beauty and age it has been named "Rock of Ages." Colonel Boles asked for complete silence. The lights were extinguished and after 30 seconds of absolute darkness a clear tenor voice, from a ranger 600 feet away, sang "Rock of Ages." The lights came on one by one until the entire Big Room was again flooded but we remained in spell-bound silence. For most of us this was a moment of rapture when our souls were merged with the Soul of All Things. As we quietly got

to our feet and resumed our journey I overheard a 12-year-old boy whisper, "Mother, I'm going to be a better boy."

The trip out is equally as interesting as the one going in. You see everything from a different approach. The crowd falls back and gives its last and biggest gasp toward the end of the journey. A wide shaft of blue-white light slants across the great cavern depth in an effect ethereal and super-natural. It's only the afternoon sun flooding through the opening.

I had dropped back, and now I walked out with the rear ranger. Our crowd, he said was average. Yesterday there had been 700, tomorrow there might be 800. The previous July and August there were from 1500 to 2000 a day. On July fourth, 3800.

The stark ugliness of the outside world hit us as we came up into daylight. We were not tired. We were excited as though we'd just thudded back to earth from the moon where we'd walked together through a beautiful garden, a garden all made of stone, a forbidden place, one that had been kept hidden from human eyes through all the ages while the earth's surface changed and the sun and moon and the stars changed places.

Carlsbad caverns are the eighth and greatest of all the World Wonders. Long before Americans began going there in crowds the Old World had heard of them. Geologists, scientists, archaeologists, research groups have been coming across the seas for many years to visit this subterranean miracle. Scarcely a day passes now without these foreign visitors. A ranger said, "Folks who have been everywhere and seen everything declare there is nothing on the earth so weirdly and grandly mysterious as our Carlsbad caverns."

So you see how it is. The longer you postpone seeing Carlsbad caverns the longer you delay the most amazing, breath-taking experience of your whole travel career.

Prizes Offered to Amateur Photographers

Each month the Desert Magazine offers two cash prizes for the best camera pictures submitted by amateur photographers. The first award is \$5.00 and the second \$3.00.

Pictures are limited to desert subjects, but there is no restriction as to the residence of the photographer. Entries may include Indian pictures, rock formations, flowers and wild animals, canyons, trees, water holes—in fact anything that belongs to the desert country.

Following are the rules governing the photographic contest:

1—Pictures submitted in the August contest must be received at the Desert Magazine office by August 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, 2½x3¼ or larger, and must be on glossy paper.

5—Pictures will be returned only when postage is enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the August contest will be announced and the pictures published in the October number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, Calif.

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While the Hopi and Navajo Indians are living in peace today on adjoining reservations, the relationship between them has not always been friendly. In fact, before the white man's government intervened, they were traditional enemies, with the Navajo usually the aggressor. The distrust which the peaceful Hopi has always held for his neighbor is revealed in some of the old Hopi legends. The folk tale related by Harry C. James for *Desert Magazine* readers this month is one of this type.

The Oraib Boy and the Hawk

(A Hopi Legend)

As told to HARRY C. JAMES

Illustration by W. MOOTZKA,
Hopi Artist

LONG, long ago when your grandfather's grandfather was a little boy, there were some Navajos living near Oraibi. They had few children and desiring to have a boy to help look after their flocks of sheep and goats, one day stole a little Hopi boy.

They were not kind to the child, giving him just enough poor food to keep him alive and forcing him to work all the time at jobs that should have been done by a fully-grown man. The poor boy became very unhappy and soon looked so thin that he resembled a skeleton more than a live child.

North, a short distance from where these Navajos had their hogan — their house made of logs and earth — was a great cliff near the top of which lived a huge hawk. Often, as the hawk flew around in his search for food he saw the little Hopi boy being so cruelly treated by the Navajos. The hawk felt very sorry for the boy and determined to help him.

One day the Navajos left the little boy behind when they were away some distance to attend a Navajo dance. As soon as they were well out of sight, the great hawk slipped from his high cliff and

flew to the Navajo camp. He began flying around in a great spiral, coming each turn a little closer to the ground. The little Hopi boy was frightened and cried to the hawk not to hurt him. The hawk lit close beside the boy and sat down right by him, saying: "I will not hurt you! You climb on my back and I will carry you away to my house where these Navajos will never be able to find you again."

The Hopi boy was delighted and climbed on the hawk's back, holding on to its strong feathers with both hands.

The hawk took a long run, then with great strong flaps of his wings, he rose in the air. He flew right over the place where the Navajos were having their dance. They could see their former cap-

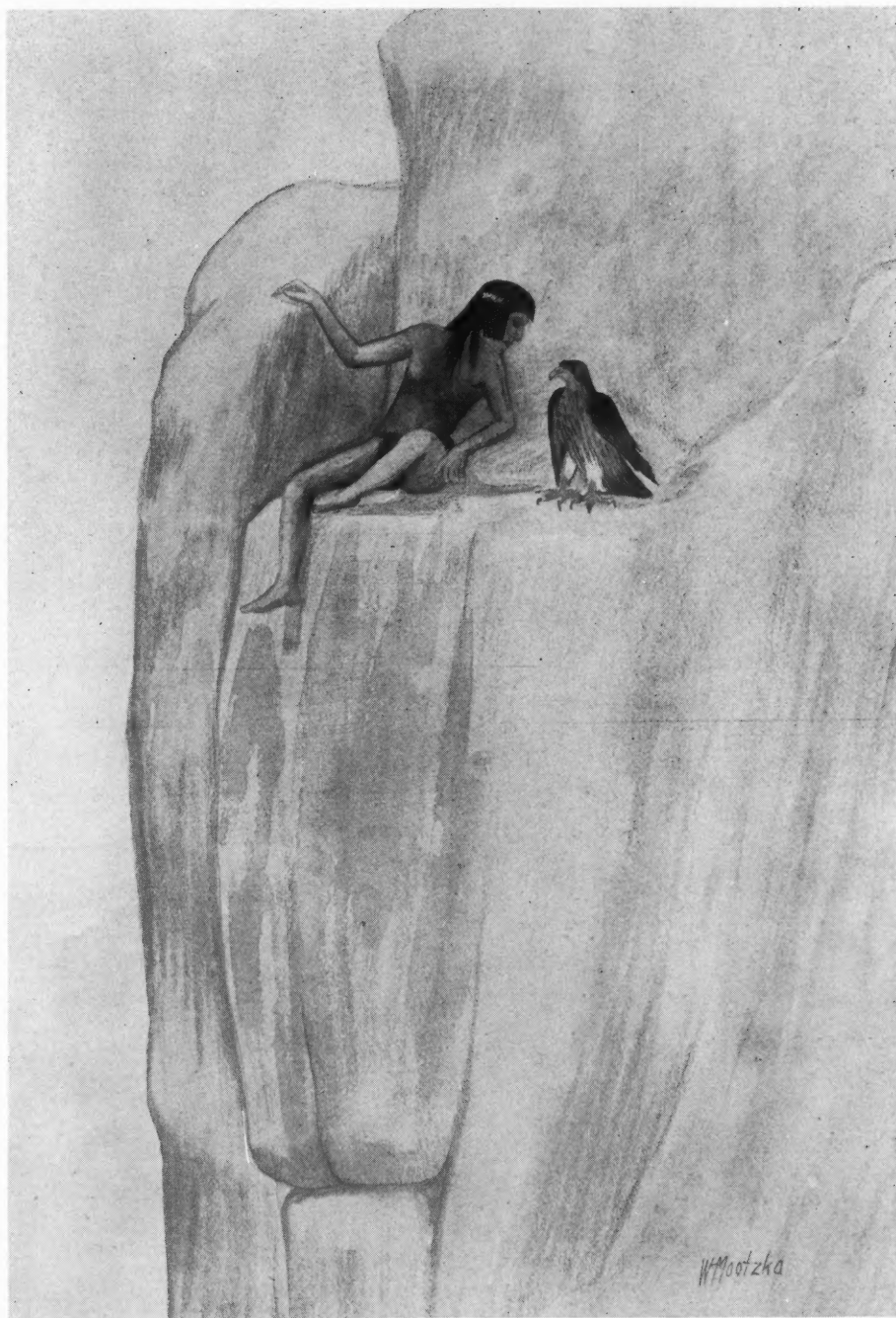
tive safe on the hawk's back and they were very much surprised. They had never expected the hawk to do such a thing.

The hawk set the little boy safely on the top of the cliff, then said to him: "You are cold. I will borrow some clothes for you."

He swooped down upon the Navajo camp and picked out the son of a great Navajo chief. The boy was richly clothed in fine buckskins. He picked the Navajo boy up, took his clothes from him and then dropped him to his frightened parents below. He brought the clothes to the little Hopi boy who pulled them on with delight.

Then the hawk saw that he had no

(Continued on page 27)





Dancing girls from Ponca, Oklahoma

Acoma Buffalo dancers



Navajo painting

Primitive Ceremonial

FROM hogan and pueblo and in every p
Indian tribesmen will gather August this
ceremonial at Gallup, New M

This is the 18th annual program Inter-Tribal I
society—sponsored by a civic-minded group of leaders
Indian country in New Mexico.

Early in August the Indians with their trek fr
the desert wilderness—traveling by pony, s
mobiles, all of them looking forward days of fr
the dancing events and in expositions where the fir
various tribes is exhibited and judged merit.

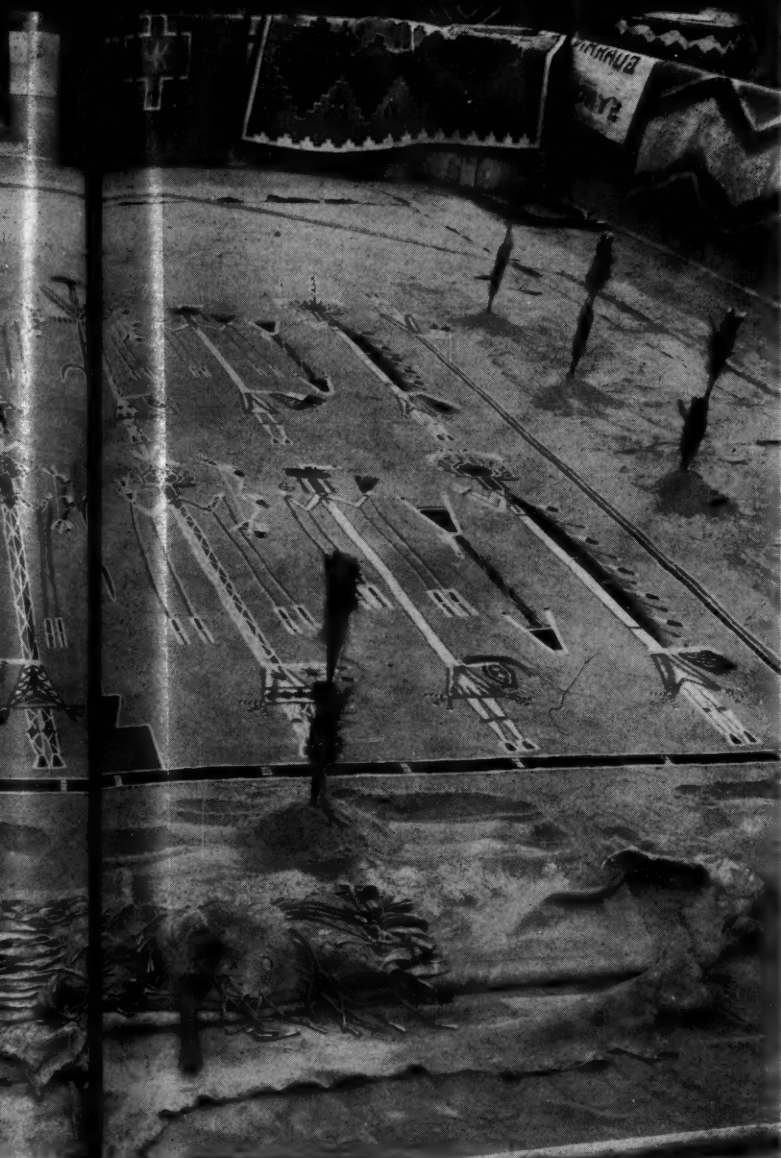
There will be the singing olla g Zuni, the D
Apache country, the Butterfly dance the Hopi m
dancers—these and more than a score tribal dan
will range from painted nakedness to beaded
ments of the most intricate design.

In the exhibit building native art may be
painting kachinas, weaving blankets in silve
drawing the delicate lines of the face and painting

The Ceremonial this year is to August 17
than in previous years. The change it was expl
patches was made to avoid the inconveniences which th
bring to that region the latter part of the year. While the d
rites are never known far in advance probably will
following the Gallup fiesta.

*With the exception of the sand paintings photographs on
studio of Bradley R. Currey, Burbank, California. Sand p
Fraser, Pasadena, California.*





Navajo Hunting

Perennial at Gallup

... pueblo and in every part of the Southwest, will gather August this year for the annual [blank] up, New Mexico. The [blank] program is the Inter-Tribal Indian Ceremonial as a civic-minded up of leaders in the heart of the [blank] Mexico.

Indians with their trek from remote corners of the country, traveling by pony, some of them in auto-rickshaws, and others on foot, for many days of friendly rivalry both in and out of the exposition where the finest craft work of the country was on display and judged on merit.

ing olla g Zuni, the Devil dancers from the
rily dance the Hopi mesas, the Navajo fire
than a score tribal dancing teams. Costumes
nakedness, colorful, beaded and feathered gar-
design.

g native may be seen making pottery,
ng blanketing in silver and turquoise and
of the faded paintings.

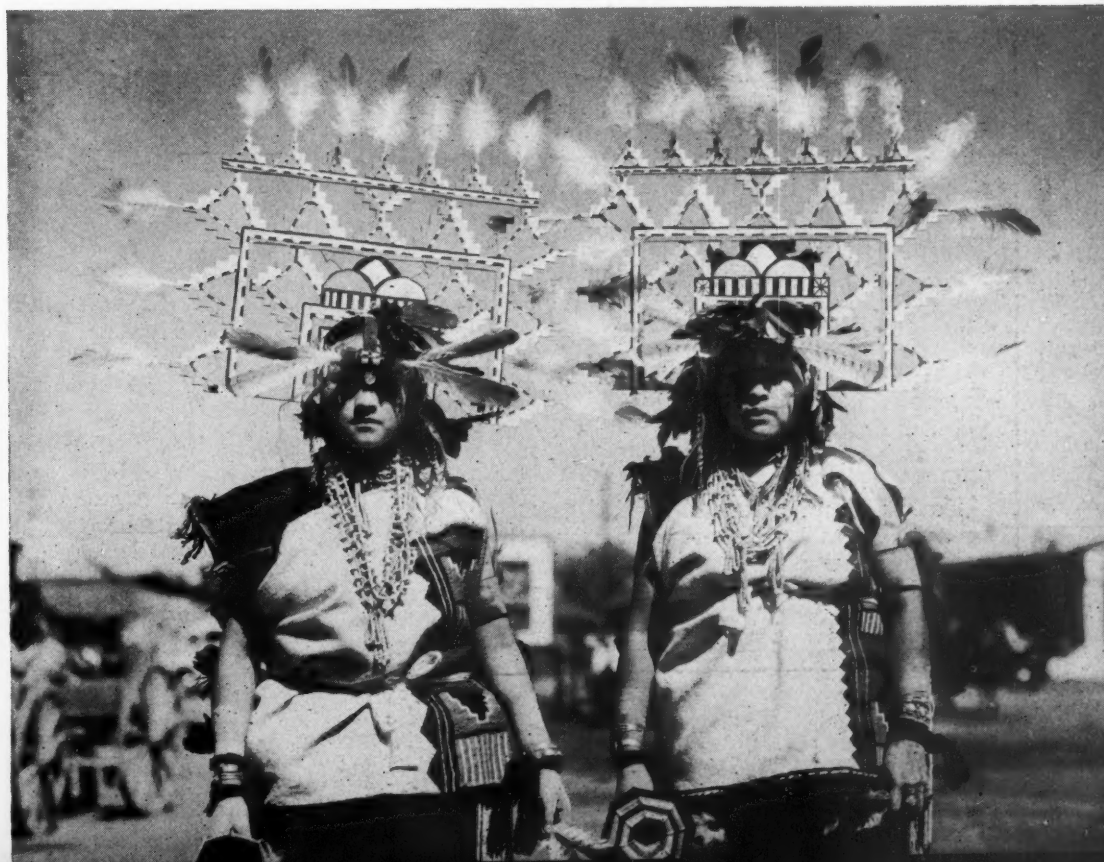
August 17 to 20, a week earlier than last year, it was explained in the press discussion which the Hopi snake dancers held in the town. While the dates of the Hopi snake dance probably will be held immediately after the

and painting photographs on this page are from the
y, Burbank, California. Sand painting photograph by
Fraser, Po, California.



Apache drummer

Hopi Kachina dancers





Here is a handful of the black obsidian nodules picked up from the ground at the base of the cliffs where they are weathering out of the rock.

LEGEND OF "APACHE LEAP"

Sitting at the edge of a cliff high among the rugged peaks of the land we now know as Arizona, an Indian maiden sat with bowed head. The stillness of the evening was broken only by convulsive sobs that came from the heart of the brown-skinned girl.

The tips of the surrounding crags were painted with the ruddy glow of the sinking sun. In the distance "Weaver's Needle" pierced the sky like a sword of gold, its base hidden amid the pinnacles and rocky massifs of the Superstition range. Far below, the tawny browns of the desert floor were giving way to the bluish haze of night.

But the beauty of this landscape meant nothing to the Apache girl, for at the base of this precipice lay the broken bodies of her father, her brothers and the lover she was to have married on the following day.

Since dawn she had huddled in this spot, oblivious to the heat of midday sun, unmindful of thirst or discomfort, aware only of the fact of her tragedy and of the emptiness of the life that lay before her.

Now the sun was sinking behind the distant range. She arose and for a moment her figure was silhouetted against the flaming sky. Then she plunged forward into space—to rest in peace with those below.

Thus is told the ancient legend of Apache Leap.

Near Superior, Arizona, John Hilton found great quantities of black pebbles weathering out of an ancient lava flow. Hilton identifies them as glassy obsidian nodules, sometimes sold under the name of "smoky topaz." According to Indian legend, however, they are "tears of stone" shed by sympathetic Mother Nature when an Apache Indian maiden met a tragic death near this spot. Here's a story that will be interesting to gem collectors and students of Indian lore.

'Apache Tears'

By JOHN W. HILTON

ACCORDING to the story the small band of Apaches in which her lover and her relatives were traveling had been ambushed by a war party of enemy tribesmen who far outnumbered them. They fought valiantly, climbing toward the fastnesses of the crags above as they retreated. By the time the summit was reached their spears were broken and their arrows spent.

Capture meant torture and death—and when suddenly they found further retreat cut off by a yawning abyss, they turned one by one and plunged to the rocks below.

The story goes on to relate that the grief of the young Apache girl was so profound it affected all nature about her. Even the mountain was said to have wept at her tragic death. In support of this statement, the Indians point to the count-

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less numbers of round glassy pebbles that lie scattered about the base of the mountain.

These "tears of stone," as the Indians call them, appear to be black until they are held up to the light, and then they become surprisingly clear, but tinged with a fine smoky grey.

My first sight of "Apache Leap" was early in the morning. A light wind had drifted the smelter smoke from Superior so that the entire mountain was enveloped in a swirling mass of silver fog. Such a sight on the desert is as beautiful as it is unusual. The morning sun shining through this smoke gave it a peculiarly luminous quality that served to accentuate the height and ruggedness of the pinnacles above.

We passed the Boyce Thompson Arboretum where so many secrets of desert plant life are being studied and solved. Its setting in a rugged canyon at the base of the mountain is indeed beautiful and fitting.

As we came within sight of Superior, we took the dirt road turnoff on the right of the highway. From the paving it was a mile to the Underwood ranch where we parked our cars to look for the gem stones we had been told were here.

We saw some of them on the ground almost as soon as we stepped from our automobiles, and as we walked toward the hills the supply became more plentiful. In some places it was impossible to walk without stepping on them.

For years these obsidian nodules have been gathered and sold by curio dealers under the name of Arizona smoky topaz. This name is as unfortunate as it is



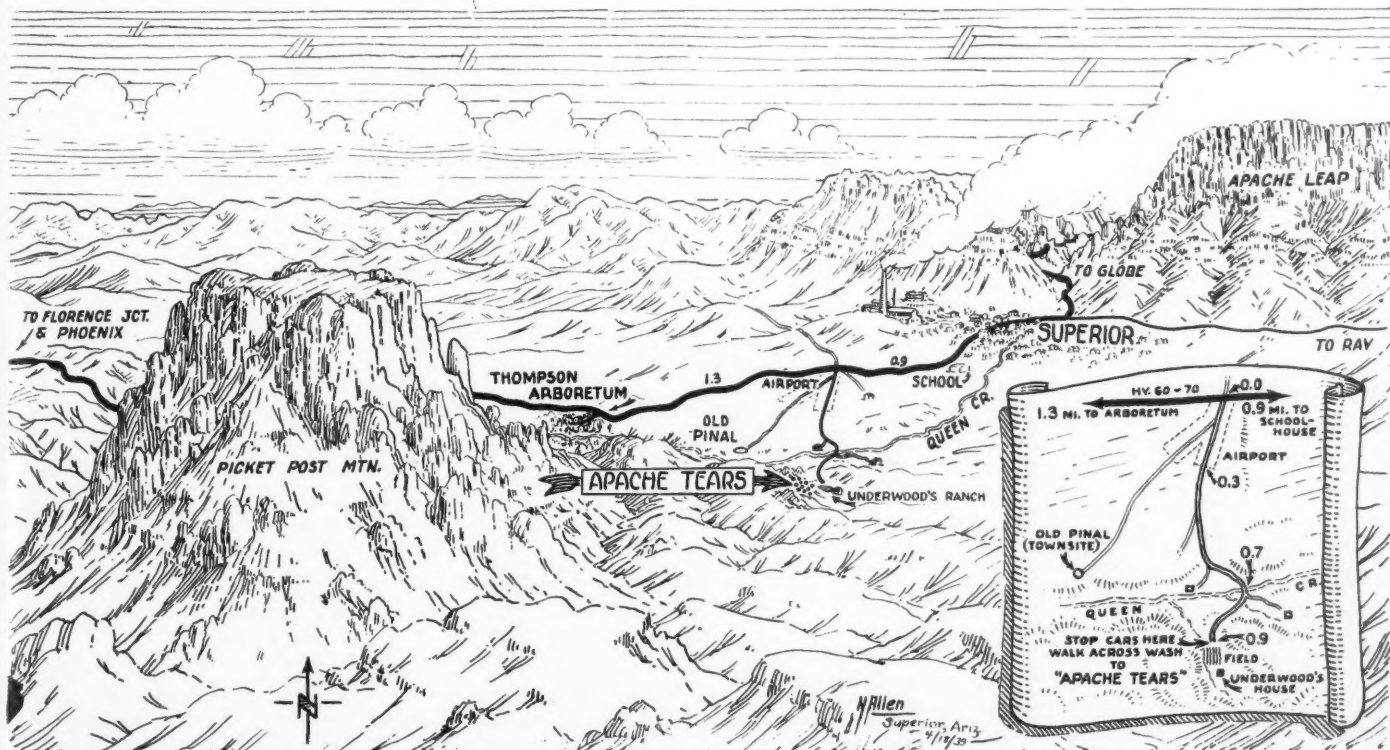
Norton Allen, staff artist for the Desert Magazine, visited the "Apache Tear" field and took this picture of his parents, Mr. and Mrs. Ernest G. Allen, as they gathered specimens on the desert near where the obsidian nodules are weathering out of the cliffs.

misleading for these lovely pebbles of obsidian are in no way related to topaz. Topaz has a hardness of eight and is a crystalline mineral, whereas these stones have a hardness of from five to six and are an amorphous volcanic glass.

It might be well here to clear up some of the misunderstanding that exists regarding the gem called "smoky topaz." Most of the faceted material sold on the market today under this name is actually a dark colored form of quartz crystal. It has been sold as "topaz" for so long a time, however, that the trade generally has accepted that name for it.

The smoky obsidian we found at this point is too soft for facet cutting, but takes a high polish and makes a rather pleasing gem in a cabochon cut. Topaz itself is seldom if ever found in a dark smoky color and is rarely cut into gems. Personally, I have never seen a true topaz "smoky" enough to deserve the name.

We had not climbed far up the hillside before we discovered the "tears" are weathering out of a flow of silver grey volcanic rock. A close examination of this rock revealed that it also is volcanic glass. The only essential difference between the nodules and the mother rock



is that the latter is so scaled and fractured that the air imprisoned in its cracks give it a sort of pearly grey appearance. The sun shining on these scales of obsidian reminds one of the luster of sea shells.

The natural conchoidal fracture of the obsidian probably is responsible for the nearly round shape of the nodules. The molten glass appears to have reached the surface under considerable pressure where it suddenly expanded and cooled, leaving a porous mass of fracture scales arranged in whorls, the centers of which nearly always contain solid nodules of obsidian. We noted that in sections of the flow where the fracture pattern is arranged in very small whorls there were no obsidian centers, but where the magma apparently cooled more slowly and the whorls were larger they all contained obsidian pebbles. This slower cooling had allowed pieces of the glass to become solid without breaking.

Many of the weathered stones have a rather fine polish due to action of wind and rain and I could not help thinking what fine necklaces could be made from the stones if they were graduated and drilled like pearls.

Toward noon the wind changed, clearing the smoke away from the mountain and bringing its rugged beauty into full view. Some of its pinnacles would be a serious challenge to the most expert rock climbers. Its scenic beauty will always make this place an inspiration to artists and photographers.

We found a friendly atmosphere in Superior. Restaurants and overnight accommodations were fine and the town itself is an interesting place to visit. It is an odd combination of the old and the new. Almost in the shadow of the giant smoke-plumed chimney of its modern smelter are prospectors at work developing their claims with no better equipment than was used by the first miners who came into this western country.

In the business district the most modern stores and service stations are flanked in some locations by old-fashioned buildings with their high false fronts—a relic of the days when Superior was a roaring silver camp and freight teams plodded along its dusty streets. Old-timers tell of the glory and excitement of the days when their fathers hauled out ore in wagons, freighting it to the Colorado river where it was loaded on barges, floated down to the gulf and shipped by sailing vessel around the Horn to Wales, where it was smelted. Needless to say, it was no low grade ore such as is the backbone of the modern mining camp. It was high grade "wire" or "ruby silver," assaying several dollars to the pound.

A police officer there told me the



The black nodules are "Apache Tears" as they occur in their matrix of pearl obsidian.

story of a freight driver who was hauling some of this rich silver ore to the river. He was overtaken by a party of emigrants who, out of curiosity, inquired as to the nature of the ore. For answer, the driver slowly drew a silver dollar from his pocket and flipped it in the air.

"That's what she be, boys! All it needs is the U. S. stamp."

It was sunset when we returned past Apache Leap. Smoke from the smelter hung about it again, but this time it was gold. High up on a lofty peak I thought I could see the figure of a lone Indian girl, poised on the brink of a cliff. But she remained immovable as long as we were in sight—just a trick of the sunlight and shadows, and perhaps a bit of imagination inspired by the legend that had been told to me.

Sez Hard Rock Shorty of ... Death Valley

By LON GARRISON



"Rheumatics?" asked Hard Rock Shorty. "Naw, I just been out imitating this guy Newton what invented aviation by gettin' hit on the head with a green apple. An' by gum I got just what any guy had ought'o get who goes stickin' his nose in other guys' businesses helpin' 'em out!"

He creaked across the porch and lowered himself stiffly and painfully into the rocking chair.

"Jimminy, I'm sore!" he moaned. "Hurts to stand up, lay down, set down, or roll over. An' it's all because I offered to help Jimmy Jenkins get some stuff up to his Gopher Hole mine shaft. He'd some picks, drills, and hammers he wanted histed 20 feet up the face of a cliff, an' it was gonna be hard work luggin' ail that junk up a ladder. So we rigged a pulley up at the tunnel, an' loaded the stuff in a powder box. I was to stay at the bottom an' pull the box up for Jim-

my to catch an' unload at the top.

"I started liftin' the first load. It was durn near as heavy as I was, but it went along fine 'til it got clear at the top.

"Hold 'er a minute while I clear a place to set it," yells Jimmy.

"I took a couple o' turns around my wrist with the rope, an' that proved to be a mistake. Jimmy reached for the box, slipped, an' fell right in the blamed thing. Well sir, that was somethin' else again!

"I couldn't let go—I was just yanked up in the air, spun around a dozen times, an' bounced all over the rocks on the way up. As I passed Jimmy he kicked me in the stummick, an' one o' the picks took a yard o' hide off o' my shin. I hit the wall one more good lick just afore I run my hand into the block. I figgered I was stuck, but I didn't know Jimmy.

"When the box hit the ground, Jimmy fell out, the box busted open, an' all the tools slid out too. Then I was heavier'n the box an' I started the return trip in high gear. On the way down I met the remains o' the box goin' up, an' that's when I lost the rest o' the skin off o' my face. I slid over a few more sandpaper rocks, an' then hit the ground so hard I bounced twice. Then durned if that rope didn't jiggle loose off o' my wrist, an' the rest o' the box come back down an' hit me on the head!

"Yup—me an' Newton learn the same way, an' I'll bet you by gum that I stay learned!"

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"COOPERATION"

—Photo by Wm. M. Pennington

'Feel' of the Desert

By JOHN STEWART MacCLARY

Labor disputes and board-of-trade manipulations do not affect the price of bread in Zuni. Each housewife serves as miller and baker for her personal family, completely controlling the destiny of grain which has been cultivated, harvested and threshed by her menfolks and children.

While each is competent to handle the complete milling process without assistance, the Zuni women have found the efficiency that comes from working together. It may be the milling room has a socializing influence similar to that of the bridge clubs of white American ladies. After all—where there are neither newspapers, radios nor telephones—there must be some method for spreading the news of the day.

The stone manos and metates used by these women may be the same ones described by Coronado's publicity man Castenada. Who knows? At least the method of using them is the same just as it must have been among the cliff dwellers whose similar utensils are found beneath the dust of ages.

Man may not live on bread alone—but he seems to have been using it a long, long time!



Brush dwelling used by the Cahuilla Indians in Santa Rosa mountains.

— Photo by E. B. Gray studio, Idyllwild.

Whence Came the Cahuillas

They are not as picturesque perhaps as some of the tribesmen in other desert regions, but the Cahuilla Indians are nevertheless industrious farmers and good citizens—and have accepted the constant crowding of the white man with amazing tolerance. In the accompanying story Ruth Pascoe has given a brief story of the background of an Indian people who once occupied Southern California from the Colorado river to the Pacific ocean.

By RUTH MARTIN PASCOE

"**W**E have been here always!" This is the reply I invariably receive when I ask older members of the Cahuilla Indian tribe of Southern California as to the length of time their people have occupied this region. According to historians and ethnologists they may be right—or they may be wrong.

It is difficult to get a complete story from an Indian. Years are consumed in gathering it. I had taken for granted that when a Cahuilla Indian said he had been here always, he meant in that particular section of land which comprises his present reservation. Only yesterday I was informed, at Cahuilla, of the distance traveled by some of these Indians in their youth. One had been baptized at Santa Barbara and another had been brought as a bride from the hills near Corona. Yet

both were of this same tribe. With this understanding, I now can see how little variation there is between the stories of the Indians and of the ethnologists.

The reservation of the Mountain Cahuilla Indians is a dry rolling valley, lying between the San Jacinto and the Santa Rosa mountains of Southern California. It is semi-desert country but it is supplied with water by both hot and cold springs. Here the fields and meadows are protected from the encroachment of distant high peaks by Cahuilla mountain itself, on whose rocky face the sun casts its hot rays and the clouds drop their darkening shadows. Beneath it rests the age-old home of these Indians. Few changes have taken place here since the coming of the first white men in 1774-1776, when Captain Juan Bautista de Anza and that

missionary beloved by Indians, Fray Francisco Garcés followed the trail up San Carlos pass and found the Cahuilla Indians living in rocky caves in the hills. Now they occupy small frame houses on the knolls of these same hills and there I have visited them often. Even those members of the tribe who have gone out into our world return gratefully to this peaceful home of their ancestors.

The other day my Cahuilla friend Cinciona Lubo was visiting me in the San Jacinto mountains. We were picking acorns for the Indians, who consider these nuts a delicacy. Cinciona said her people had come here to gather acorns for many generations. They felt these mountains belonged to them. When we took her picture picking acorns, Cinciona said, "No Indian woman used to carry a bur-

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lap sack to hold her acorns. She wove a hammock (carrying net), to carry over her shoulder as she picked. But she did use a basket like this of my Aunt Nina's, which she filled first."

It is through Cinciona that I have come close to the lives of her people. She interprets not only their language but their thoughts and feelings. Cinciona, born an Indian and educated at Sherman institute, has lived much of her life among white people. Her amazing intuition and unflinching good humor permit her to fit into white or Indian role with equal ease.

Though these Indians always have been extremely poor, they would prefer to live and die on this land of their ancestors and trust nature to provide for them, than to exchange it for any wealth the white man might offer.

Of course some of the earlier Indians may be blamed for losing their land. They were not shrewd enough to deal with invaders who would trade them seven cows for a whole mountain.

That the ancient Cahuillas roamed the entire San Jacinto mountain area is evidenced by petroglyphs and grinding holes found frequently today. Many of their legends are woven around San Jacinto and Tahquitz.

According to Dr. David Prescott Barrows in "The Ethno-Botany of the Cahuilla Indians," this tribe "once controlled Southern California from the Colorado river westward to the Pacific sea."

In "The Handbook of the American Indians North of Mexico," compiled in 1907-1910 by Frederick Webb Hodge, now director of the Southwest Museum at Los Angeles, information concerning this tribe is found under the name Kawai. Dr. Hodge says there have been changes in the spelling of the name Cahuilla.

To study the genealogy of any family it is necessary to watch the change in spelling of that family name back through the records. The Cahuillas were called *Danzarines* by Fray Garcés, because of the odd gestures of their hands when they talked. These mannerisms are noticeable today during ceremonials, as an accompaniment to the dancing movements of their feet. Another name for the Cahuillas was told Garcés by his guide. It is the Mojave name *Jecnich*. However, Cahuilla is now generally adopted. This word is of uncertain origin. It is said to be a Spanish version of *Kawika* (westward, literally mountainward) in A. L. Kroeber's "Ethnography of the Cahuilla Indians."

Most authorities agree in listing three divisions of the Cahuilla Indians of Southern California, living in these stated localities:

- (1) Mountain Cahuilla, in the moun-



Cinciona Lubo gathers acorns in the San Jacinto mountains as her ancestors have done for many generations—except that they used fibre carrying-nets of their own weave, instead of gunny sacks.
— Photo by E. B. Gray, Idyllwild.

tains and canyons surrounding San Jacinto peak.

- (2) Pass Cahuilla, in San Geronimo pass and at Palm Springs.

- (3) Desert Cahuilla between Indio and the Salton Sea.

In the late summer when the Indians hold a rodeo at one of their mountain reservations, it is possible to see representatives of all three groups. It is also evident some of these Indians have traveled a long distance. They come prepared to remain for a week in the brush huts, which they weave, in the shelter of Cahuilla mountain.

Although the three groups of the Ca-

huillas have some difference in dialect, the members of one group understand those of another. Their language is Shoshonean in origin.

All of these Shoshonean tribes are members of a more ancient family called "Uto-Aztecan" by Hodge, Kroeber, and other authorities. Dr. Hodge says, "Their habitat extended almost from the Canadian border to southern Mexico." Dr. Kroeber tells us that this association of Shoshoneans in California "opens a far perspective. The lowly desert tribes and simple-minded folk of the southern coast are seen in a new light as kinsmen, however remote, of the famous Aztecs."

Among primitive desert peoples there

was constant migration, due to climatic conditions and the ceaseless search for water and food. The Cahuillas were no exception, hence in any general movement one group, of necessity, had some intercourse with the others. In August, when the piñon nuts of the mountain regions ripened, and later when acorns fell, the Cahuillas moved up there for the purpose of gathering their winter's supply of nuts. When it was time to visit the desert to gather mesquite beans, as well as cactus fruit, the Cahuillas were free to go. Charles Francis Saunders tells us almost every variety of cactus was used by the Indians for food.

While Curtis says the fauna of the Desert Cahuilla consisted of "antelope, deer, mountain lions, wildcats, tortoise, and lizards," he adds, "Fish were not available to the Desert Cahuilla within historic times, but the mountaineers secured limited quantities of trout."

Today men travel from far cities to hunt and fish in these mountains for sport and it is quite probable that the Desert and Pass Cahuilla Indians of an earlier day made similar excursions for food. Just prior to historic times, it is likely the Mountain Cahuillas went to the desert to fish. Among the Cahuillas is a tradition of their ancestors, who impounded fish in circular enclosures of stone—open at one end—when the great Inland Sea beat against the high cliffs about Coachella valley. Remains of these "fish-traps" are still to be seen, and so is the ancient shore-line along the base of Santa Rosa mountains.

Tracing the wanderings of these migratory people, we can see the need for their having large territories in which to roam. Most of their trails kept them in sight of San Jacinto and San Geronio peaks. These great mountains have been called the "Two Brothers" by the Indians, who believe they are early creations of the "Earth Mother."

Perhaps only the mountains themselves who have so long sheltered these Indians, could give the true answer as to whence came the Cahuilla Indians. Any man, primitive or modern, who travels within sight of those mountains must feel the sublimity of San Jac and "Ol' Grayback." This can help us to understand the Cahuilla Indian. Life changes for him as for us. He who is here today is gone tomorrow. Yet, the Cahuilla wishes to die as he has lived, within the shadows of these mountains. He knows that they long have endured. They have an unchanging effect upon any responsive soul who goes out to them year after year, as does the Indian, for a renewal of faith and courage.

DESERT QUIZ

Some of the Desert Magazine readers are making high scores in the monthly Quiz. All who read these questions and verify the answers are learning interesting new facts about the most fascinating area in the United States. The questions include history, geography, botany, Indian life and lore of the desert. If you can answer 10 of them correctly you are a well-informed student of the desert. If you score 15 you are eligible for the fraternity of "desert rats." If you answer more than 15 correctly you are entitled to the degree of S. D. S.—Sand Dune Sage. Answers on page 28.

- 1—Cochise county, Arizona, is named after—
A Spanish explorer..... A famous Navajo.....
A Yaqui warrior..... An Apache chief.....
- 2—Most of the reptiles on the desert, if exposed to the direct rays of mid-summer sun will—
Die..... Go to sleep..... Become vicious..... Go blind.....
- 3—Watermelons first were brought to the desert country by—
White pioneers..... Prehistoric Indians.....
Spanish invaders..... The Padres.....
- 4—Lee's Ferry on the Colorado river was named for—
A celebrated explorer..... A noted fugitive.....
A southern general..... A pioneer missionary.....
- 5—Fron Dante's View a visitor looks down on—
Searles dry lake..... Devil's playground.....
Salton sea..... Death Valley.....
- 6—The leading character in Dr. Herbert Bolton's "Rim of Christendom" is—
Father Serra..... Coronado..... Portola..... Father Kino.....
- 7—The White Sands national monument is located in—
California..... Nevada..... Utah..... New Mexico.....
- 8—Chin Lee, Arizona derives its name from—
The Navajo language..... An Indian trader.....
A Chinese camp cook..... Early Spaniards.....
- 9—One of the epic marches in the military annals of the Southwest was made by—
The Seventh cavalry..... The Mormon Battalion.....
The Ninth infantry..... Fort Yuma garrison.....
- 10—The desert "swift" is—
A fox..... A reptile..... A bird..... A rodent.....
- 11—The monument of Hadji Ali (Hi-Jolly) famous early day camel driver on the southwest desert is located near—
Yuma, Arizona..... Ft. Defiance, Arizona.....
Quartzsite, Arizona..... Tehachapi, California.....
- 12—Chuckawalla well in Southern California formerly was a relay station on the—
Bradshaw stage road..... Santa Fe trail.....
Butterfield route..... Broadway of America.....
- 13—Blossoms of the Smoke tree are—
Indigo..... White..... Yellow..... Pink.....
- 14—Purpose of the Lieut. Ives expedition was to—
Make peace with the Mojave Indians.....
Determine the navigability of the Colorado river.....
Open a new route across the desert to California.....
Establish the boundaries after the Gadsden Purchase.....
- 15—The Valley of Fire in Nevada was named because of its—
Volcanic craters..... Rock coloration.....
Extreme heat..... Smoldering coal beds.....
- 16—The alloy most commonly found in native gold is—
Silver..... Copper..... Zinc..... Lead.....
- 17—At the Tinajas Altas along Camino del Diablo in southern Arizona, water is found in—
A well..... Natural tanks..... A spring..... Underground lake.....
- 18—Boulder Dam Recreational area is administered by—
Nevada State Park commission..... U. S. Park Service.....
U. S. Forestry Service..... Reclamation Bureau.....
- 19—The Navajo Indians have common tribal ancestry with the—
Plains Indians..... Pueblos..... Apaches..... Pimas.....
- 20—The greatest area of unexplored land in the Southwest is in the state of—
Utah..... New Mexico..... Arizona..... Nevada.....

ORAIBI BOY . . . *Writers of the Desert* . . .

(Continued from page 17)

moccasins. Again he swooped down on the Navajos and picked up another little boy and took off his moccasins and dropped him down to his terrified parents. The Navajos were now so frightened that they scattered out in all directions. The dance was forgotten. They were in such a hurry that they left many valuables behind which the hawk secured for the little Hopi boy.

It was then time to eat. The hawk ate only raw food, but he brought wood and fire for the boy who cooked for himself and had plenty of good food. The little Hopi stayed with the hawk four days. In that time he recovered his strength from the good food the hawk brought him to eat. Then he climbed again on the back of the hawk and off they flew from the high cliff. Before going back to Oraibi, however, the hawk circled several times around the old Navajo camp so that the Indians there were frightened.

They could see the happy little Hopi boy on the hawk's back. The hawk then flew to Oraibi and returned the boy safely to his own father and mother.



DON'T COOK THE COOK THIS SUMMER an ELECTRIC RANGE is COOL

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DAM POWER

LECIE McDONALD VIOLETT whose entertaining story of her trip through Carlsbad Caverns appears in this number, is a resident of Denver, Colorado. She started her career as a music teacher—but married a railroad man and this involved moving so often she finally had to give up her music. "I'd no more than get a dozen pupils over the rough spots than it was time to move again," she explains. "So I cast about for a career that would move with me — and ironically enough, now that I have a profession I can pack up and take anywhere we've never left Denver."

Mrs. Violet's features have appeared in Country Home, Family Circle, American Press, Midwest, Rocky Mountain News, Denver Post, and she has written syndicated material for a number of other newspapers.

Hundreds of manuscripts are submitted to the Desert Magazine every month. Only a few of them are accepted. Writers, perhaps, will be interested in knowing some of the reasons for rejection:

1—Lack of good pictures. Clear, well-composed photographs are no less important than well-written text matter in the editorial program of the Desert Magazine. Prints must have strong contrast for halftone reproduction, and should be on glossy paper not less than 5x7 inches.

2—Outside the field. For the present the Desert Magazine is limiting its material to the desert area of southwestern United States, that is the states of Arizona, New Mexico, Nevada, Utah, and California.

3—Lack of human interest. Desert Magazine editors are not interested in impersonal essays, no matter how scholarly they may be. Human interest is essential. As far as possible stories should be built around personalities—or be written from a personal angle.

4—Ugliness is barred. There is both beauty and ugliness in everything, according to your viewpoint. And that includes human beings as well as landscapes. The Desert Magazine is interested in the beauty of people and things. The editors believe it is possible to present the cheerful aspect of desert subjects—and still be accurate and realistic.

It is always a mistake for a writer to submit material to any magazine without first making a careful study of the type of material and the general editorial pattern of the publication.

If in doubt as to the acceptability of your material, query the editor. The Desert Magazine welcomes such inquiries.

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GREAT STONE FACE

tion of the stone figure pictured below. The Great Stone Face is in Utah, and is one of the most interesting landmarks in the Southwest. Below is Mrs. Freda's story:

Frieda Freda of Anaheim, California is the winner of the \$5.00 prize offered by the Desert Magazine for the most accurate identification and description of the stone figure pictured below. The Great Stone Face is in Utah, and is one of the most interesting landmarks in the Southwest. Below is Mrs. Freda's story:



Photographs sent to the Desert Magazine by Frank Beckwith, Delta, Utah.

By FRIEDA FREDa

THE Landmark pictured in the May issue of the Desert Magazine is "The Great Stone Face" in west central Utah, and bears a striking resemblance to Joseph Smith, one of the Mormon prophets.

This rock face is located 18 miles from Delta, Utah, and is 11 miles from U. S. Highway No. 6. The road is passable the year around.

A splendid view of the Utah region surrounding this landmark can be obtained from the top of the head. The panorama includes Notch peak with an elevation of 9725 feet, Marjum pass, Antelope pass, Swasey peak, the Drum mountains, Simpson range, Fish springs range, Mt. Nebo, 11,000 feet, and Mt. Belnap, 12,200 feet, in the Tushar (White) range.

Father Escalante passed near here. His route was through Scipio pass south of Fillmore, and then west of the present town of Deseret, thence south between Pavant butte and Clear lake to Milford by way of Beaver creek.

Standing at this landmark one's imagination

can conjure pictures of the days when water was more plentiful in this area than now, when Indians lived here in large numbers—and of later periods when Escalante's band toiled across this desert—and of a still later period when the Mormon pioneers were trekking this way.

It is not a hard trip to The Great Stone Face, but a most inspiring one, especially at high noon when the lights and shadows bring out the lines of the face to best advantage.

• • •

JOJOBA PLANT MAY HAVE COMMERCIAL VALUE

As a result of experiments conducted by the U. S. Forestry service the jojoba plant (pronounced ho-hoba), found in the deserts of southern Arizona, California and Mexico may find a useful place in American industry. The chemical analysis of the oil of this nut shows that it contains 45.66 per cent crude fat. It has been used as a substitute for olive oil and in the manufacture of face cream, soap, rubber cement, blow gum, linoleum, baked enamel and as an agent in waterproofing

cloth and paper and multiple other uses.

Jojoba is known by several common names such as coffee berry, goat nut and bush nut. Botanically it is *Simmondsia californica*. It is recognized by its thick leathery blue-green leaves and sometimes grows to a height of six or eight feet.

DESERT QUIZ ANSWERS

(Questions on page 26)

- | | |
|--|----------------|
| 1—An Apache chief. | 2—Die. |
| 3—Prehistoric Indians. | |
| 4—A noted fugitive. | |
| 5—Death Valley. | 6—Father Kino. |
| 7—New Mexico. | |
| 8—The Navajo language. | |
| 9—The Mormon battalion. | |
| 10—A fox. | |
| 11—Quartzsite, Arizona. | |
| 12—Bradshaw stage road. | |
| 13—Indigo. | |
| 14—Determine the navigability of the Colorado. | |
| 15—Rock coloration. | 16—Silver. |
| 17—Natural tanks. | |
| 18—U. S. Park service. | |
| 19—Apaches. | 20—Utah. |

Suggestions for Summer Visitors to Death Valley National Monument

The popular idea that Death Valley national monument is dangerous and cannot be traversed during the summer due to the extreme heat and low relative humidity is correct only in part. Visitors from the east and those who cannot visit the valley during the winter months can see this desert wonderland in safety and comparative comfort by observing a few simple rules and using common sense.

On the other hand, the dangers of Death Valley summer heat are not to be minimized. Temperatures of 120 degrees or higher in the shade are common; and sun temperatures far exceed this figure. The extreme heat and the great distances between inhabited points makes it imperative that precautions be taken.

The following suggestions are made by the National Park service authorities to guide those contemplating trips into the monument between May and October:

1. **CARRY PLENTY OF WATER.** A minimum of one half gallon of water per person and five gallons for the radiator is necessary. Drinking water is best carried in water bags or canteens and should not be ice-cold. Radiator water is available at strategic points along the main roads.

2. **HAVE SUFFICIENT GASOLINE AND OIL.** Filling stations are 30 miles or more apart. **TIRES** should be in good condition; at least one spare tire is necessary. **DO NOT DEFLATE TIRES.** By the time you reach Death Valley tire pressure will be constant. Check tire tools and car jack before starting trip.

3. **STAY ON THE MAIN ROADS.** The main roads in the valley are patrolled by park rangers. Unpatrolled roads are posted as such and should be avoided.

4. **STAY WITH YOUR CAR.** If car trouble develops, do not attempt to walk any distance for help. Wait for a ranger or another traveler.

5. **WEAR A HAT** while in the sun. A little table salt in a glass of water aids one materially to withstand the heat.

6. **WATCH THE TEMPERATURE OF YOUR CAR MOTOR.** Your car motor will heat on the hills. Cool the motor, if it boils, by turning the car into the wind (usually the wind blows up hill in the daytime) and leave the motor idle. Don't turn the ignition off until the temperature of your motor drops. If a "vapor lock" develops, cool the fuel-pump and gas line to the carburetor with a wet cloth, and let motor cool. If on a hill, the motor can be started by coasting in gear. Do not blow into the gas tank; the gasoline will spurt back into your face.

7. **DON'T TAKE CHANCES, DON'T GET EXCITED.** **USE COMMON SENSE.** Inquire of a ranger regarding current road information in the monument, and heed his advice.

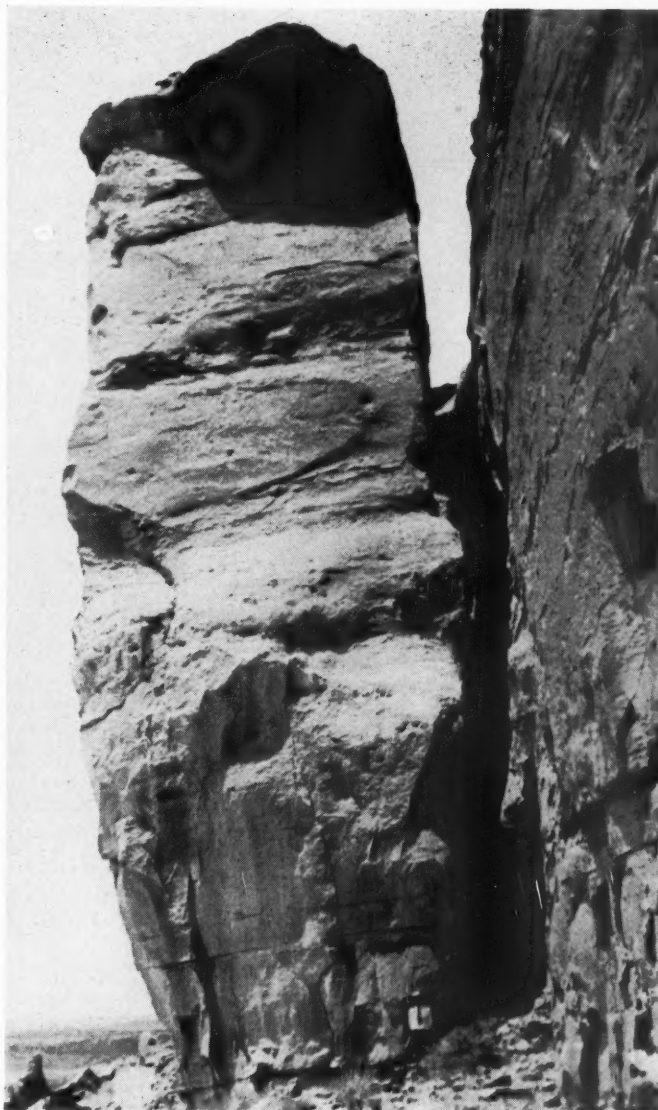
If the above suggestions are observed, your summer trip into Death Valley will be a pleasant adventure. Often the daytime temperature is only 100 degrees or so, and in any case the low relative humidity makes even higher temperatures no more than uncomfortable.

Many of the side trips in the high country are open, and areas inaccessible during the winter can be visited with ease. For instance, one can drive up Wildrose canyon to Mahogany flat, at an elevation of 8500, and hike six miles on an easy trail to Telescope peak, 11,325 feet above the Valley floor.

Last year upward of 7000 people visited the monument during the summer months and due to the travel to the San Francisco World's Fair this figure is expected to be materially increased this summer.

STRANGE ROCK IN NEW MEXICO

Who can identify this picture?



Prize Contest Announcement

A fairly large book might be written about the rock shown in the above picture. Both its history and its present day status are interesting.

It is located in New Mexico, in a place easily accessible. Hundreds of visitors go there every year and hear the strange story connected with this formation.

Desert Magazine readers who pride themselves on their knowledge of the Southwest should know more about this rock. As a test for those who have visited the place, and as a source of information for others, a prize of \$5.00 will be paid by the Desert Magazine to the reader who identifies the picture and sends in the best 500 word story about it.

The manuscript should include exact location, highway facilities, and all the history and interesting facts which can be put into a 500-word descriptive article. Entries should be addressed to Landmarks Editor, Desert Magazine, El Centro, California, and must be received by August 20, 1939. The winning reply will be published in the October number of this magazine.

GALLUP, NEW MEXICO

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Here and There ... ON THE DESERT

ARIZONA

Flagstaff ...

Hon-why-nem, (Walking Girl), first Hopi Indian girl to receive a degree from any college, was a member of the 1939 graduating class, Arizona State teachers college, Oraibi—which claims to be the oldest continuously inhabited town in North America—is Walking Girl's home. She says she will teach in Indian service schools.

Tucson ...

White man makes tardy discovery he doesn't know as much about beans as the Indian knew 400 years ago. Prof. Ian Briggs of the state university announces the red man was right when he grew the Hopi (lima) bean in days when primitive American agriculture struggled along without farm advisors and crop benefits. Pale-face experts later talked the Indian into planting other kinds of beans. Now these white-collared specialists find the Indian knew best, the Hopi bean is tops for Indian farmers, says Professor Briggs. An "improved" strain of the Hopi bean will be tried.

Phoenix ...

Arizona will buy 152,208 pairs of 1940 license plates for private automobiles and trucks. State highway department has called for bids, will also want 7,618 single plates for trailers, motorcycles and dealers' cars. Passenger automobiles will use 116,750 pairs of plates. Passenger car plates will have dark blue letters on white background, commercial plates yellow letters on black. Across the top "Ariz. 1940," across the bottom "Grand Canyon State." Maricopa county takes the lion share of passenger car plates, 50,000. Next county, Pima, uses 19,000.

Phoenix ...

"The Padre on Horseback" is bronze plaque to be placed at St. Francis Xavier chapel here in honor of Father Eusebio Kino. The plaque shows Father Kino riding in the desert foothills of the Pima Indian reservation. Forty-two inches high, the memorial carries this legend: "1645-Eusebio Francisco Kino, S. J.—1711. Apostle to the Pimas. Mighty spiritual captain; dauntless explorer; earliest ranchman in the Spanish Southwest; builder of missions; statesman. He was the first to traverse and map Pimeria Alta (Northern Sonora and Southern Arizona); he first brought domestic animals into Arizona; San Xavier Mission was founded by him; and he it was who proved that California is not an island but a peninsula accessible from Northern Mexico.—Frank C. Lockwood."

Tucson ...

Phelps Dodge corporation gives a new college of mines building to Arizona university. Entire cost of more than a quarter million dollars will be paid by the corporation. University regents have ordered plans for construction, following unanimous vote to accept the offer made by P. G. Beckett, P-D vice president. The building will be named in honor of Dr. James Douglas, pioneer in Arizona copper mining. Ninety-three of the 383 students enrolled at the college are registered in mining engineering.

Showlow ...

Headed by Dr. Emil W. Haury of Arizona U. anthropology department, 14 archaeological students are excavating 10 miles south of here the site of a city believed to have flourished about 700 A. D. as part of the Mogollon culture.

Yuma ...

Surveys are under way for water tanks and other improvements on the 690,000-acre Kofa mountain wildlife refuge, first steps to preserve Bighorn sheep range in arid southwestern Arizona. Engineers of U. S. grazing service and U. S. Indian service are working with officials of the federal biological survey. John Ray Painter, regional grazier, says: "Indian service will supply a crew of 40 men throughout the year to improve the range. These men are now in camp on the range, enrolled in the CCC. Surveyors will stake out water holes and spillways to be built this year."

Kingman ...

Soon the state flag will float from the quarterdeck of an addition to the Arizona navy. State's Colorado river commission announces plans for 18-foot flatbottomed boat to navigate the Colorado for inspection of damsites "and other matters." One duty of new flagship will be to collect samples of sand, rock and other material from proposed Bridge canyon damsite at upper end of Lake Mead.

Grand Canyon ...

One of the boats used by Maj. John Wesley Powell on his second expedition down the Colorado river in 1871-72, found near the Paria on the Weaver ranch, has been placed in the museum here. Identity of the craft as the "Nellie Powell" has been established, says Edwin D. McKee, park naturalist. Frederick S. Dellenbaugh, recorder for the Powell expedition, wrote: "We had to leave one boat, the Nellie Powell, behind and Powell gave it to John D. Lee, who had been helpful to us. With this he started the ferry known by his name." The old hull was unearthed near Lee's Ferry by Leo Weaver.

CALIFORNIA

Banning ...

Metropolitan district's aqueduct from the Colorado river to the coastal plain will be ready to carry water as soon as a 700-foot siphon at the west portal of San Jacinto tunnel is completed. Construction under way will be finished by the time clean-up work in the tunnel is done. Thirteen miles of railroad track used in excavating and lining the tunnel must be removed. Tunnel lining of concrete has been placed.

Indio ...

Ice-dip packing for sweet corn brings profits to George Ames, produce shipper. Corn is crated, each crate holding four to six dozen ears is dipped in a vat of crushed ice, kept there 30 minutes, then loaded into refrigerator trucks or refrigerator express cars. The corn is said to arrive at destination in better condition than untreated corn fresh picked in the field.

The DESERT MAGAZINE

Barstow . . .

Wild burros roaming the desert regions of California found defenders in the state legislature when senate and assembly voted approval of a bill to prohibit slaughter of the old-time prospector's friend and pack-animal. Senator Ralph Swing said burros were being killed to make cat and dog food. Desert dwellers, however, are not unanimous in saying a good word for the burro. Some cattlemen say burros hog water holes, prevent calves from drinking, cause livestock losses.

Palm Springs . . .

Petitions for disincorporation of Palm Springs were shy 14 names of the required 20 per cent of voters, Superior Judge O. K. Morton has ruled. Therefore the court acted to cancel election which had been scheduled for June 20 on the question whether this community should continue its incorporated existence. There were 306 names on the petition, but only 261 were qualified voters as of November 8, the court was advised by Mrs. Harriett Cody.

Bishop . . .

Thirteen-day wilderness trip in the saddle is sponsored by American Forestry association. Schedule calls for departure of "Trail Riders" from Bishop on August 20 for exploration of high Sierra country in Inyo, Sierra and Sequoia national forests. The party will be led by Norman (Ike) Livermore, veteran Sierra club guide.

NEVADA

Boulder City . . .

Game wardens are upset, fishing laws for Lake Mead behind Boulder dam are a "tangled mess," anglers are confused. Sheriff M. E. Ward arrested Bob Robinson for alleged violation of rules established by Arizona and Nevada commissions. But district attorney Roland H. Wiley refuses to prosecute until the Nevada attorney general hands down an opinion. Trouble: Nevada legislature passed a bill empowering the state fish and game commission to fix legal limits for fishing in the lake and river, after agreement with the Arizona commission. Wiley says the bill provides no penalty for violation. There is a general law which does set up a limit, prescribes penalties.

Carson City . . .

Collection of relics from caves and Indian mounds—especially in White Pine county—is authorized in a WPA project for which \$15,000 is expected. Curator M. R. Harrington of the Southwest museum of Los Angeles will direct the work. Harrington uncovered the lost city at St. Thomas; made discoveries at Lovelock cave in Pershing county, at Gypsum cave and near Pyramid lake, where his activities were suspended when Indians protested. Interesting finds during the White Pine digging will be placed in the state museum at the old mint building here.

Silver Peak . . .

Light signals flashed across the desert notify miners in an isolated community when telegrams are received at the local substation of the Nevada-California Electric corporation for any one at the mine. By rough and dusty road it is 15 miles from the power station to the mine. System worked out with the mine superintendent: Power crew turns off station lights at exactly 8 o'clock at night, to report receipt of a telegram. In the clear desert air the lights are seen easily at the mine, a messenger is sent to pick up the wire.

Carson City . . .

Alfred Merritt Smith (Long Tom) has been reappointed state engineer. This is third major appointment of Governor E. P. Carville. Smith is a native of Nevada, graduate of the state university, completed on May 28 a four-year term in the office Carville asked him to retain.

NEW MEXICO

Santa Fe . . .

Federal government appropriation of \$250,000 for Coronado exposition pageants in Arizona, West Texas and New Mexico in 1940 has been recommended by the state department at Washington. Celebrations commemorating 400th anniversary of Coronado's exploration of the Southwest thus receive endorsement insuring congressional action, says New Mexico's Senator Chavez.

Las Vegas . . .

Announcement by Governor Miles launches proposal to establish a national monument at old Fort Union near here on the Santa Fe trail. Plans call for transfer of 1200 acres to the federal government under surveys the park service has been asked to make. Road would be built to the fort site from U. S. highway 85.

Albuquerque . . .

After 25 years in the U. S. biological survey, Regional director Don A. Gilchrist is retiring. From headquarters here Gilchrist has supervised activities in Texas, Oklahoma, New Mexico and Arizona. John C. Gatling of this city will be acting director.

Alamogordo . . .

Contract was awarded to Skousen brothers of Albuquerque for surfacing 29 miles of highway between the White Sands and the Organ mountains, closing the last gap on highway 70 between here and Las Cruces.

Santa Fe . . .

Hand-carved plaques will mark the historic palace of the governors now housing the state museum here. At each side of the main entrance, plaques will carry legends outlining history of the building from its construction about 1612, through Spanish, Mexican and American rule.

Gallagher . . .

Thomas R. Gallagher, passenger traffic manager of the Santa Fe railroad system, is honored in the new name of this station, known until June 11 as Portair.

UTAH

Salt Lake City . . .

High flying geology students of the state university pursue their collegiate work in the clouds. A transport plane has been chartered for their use, trips have been made over Grand, Zion and Bryce canyons. Instructor Bronson Stringham says: "For elementary geology study an airplane trip is unequaled because it gives the students a general viewpoint of large formations."

Hite . . .

Bert Loper began his 47th year as a riverman when he launched here a rowboat expedition bound for Lee's Ferry on the Colorado, first expedition of the season to start downstream on a journey scheduled to end at Boulder dam. Loper will be 70 years old on July 31, says he will celebrate his birthday at the end of the voyage. He is chaperoning two geologists to Lee's Ferry, will pick up there a party of four to continue to the dam.

Vernal . . .

To photograph the "highest vertical drop cliffs in the world" three men and their wives planned a trip by boat down the

scenic Yampa river canyon from Lily Park, Colo., announcing their destination as the Dinosaur national monument or the Jensen bridge on the Green river. Leader of the expedition was Bus Hatch, who had made five trips over the route, noting caves, natural bridges and other formations interesting to explorers.

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AT LONG BEACH



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EARL R. MILTON, MANAGER

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—a monthly review of the best literature of the desert Southwest, past and present.

DOCTOR FINDS ADVENTURE ON SOUTHWESTERN FRONTIER

When young Dr. Bush turned his back on Louisiana swamplands and headed for west Texas, he had already discarded his "wild and woolly West" ideas. It was 1891—the Apache troubles had been quelled a few years before; the stagecoach had been outmoded almost ten years. As he traveled west in the luxurious kerosene-lighted train, the comparative civilization of eastern Texas gave no hint of the adventures awaiting him—adventures of more momentous character than those associated with many of the Western heroes.

For Dr. I. J. Bush was not only to play the important role of a frontier doctor, but to enter into affairs of national and international consequence. In *GRINGO DOCTOR*, published by Caxton Printers,

May 1939, he has told of his life from the early days of practice in Ft. Davis, Pecos and El Paso through the aftermath of the Madero revolution in Mexico.

"There is a difference between a greenhorn and a tenderfoot. The greenhorn may learn, but the tenderfoot never." Dr. Bush was a greenhorn, but not for long. His easy adaptability and his skill as a surgeon soon won him the confidence and friendship of American, Mexican and Indian alike.

After eight years of practice in the rugged Davis mountain country, where there were only four doctors to an area as large as Massachusetts, he settled in El Paso, which was then a wide-open Western town of 16,000 population. It was during this period that his interest in Mexico began, first in big game hunt-

ing trips, later in archaeological expeditions.

His bond with Mexico was strengthened when he became chief surgeon for the extensive mining and lumber interests of Bill Greene and Albert B. Fall in the states of Chihuahua and Sonora.

Upon his resignation and return to El Paso, he found revolution in the air. His friendship with those who now became leaders in the revolt led the Gringo doctor to become not only an American sympathizer in raising funds and ammunition, but to assume the active duties of *Coronel del Cuerpo Medico Militar de Ejercito Libertador*. As a friend of Madero, Abraham Gonzales and Pancho Villa, and as a participant in the 1911 revolution, Dr. Bush was able to give a clear exposition of the forces at work across the border and of the circumstances which caused distrust and resentment against the government at Washington.

GRINGO DOCTOR is more than the autobiography of a Western pioneer. Because of the author's association with men and events of unusual significance, his book is also the story of a western frontier during the years of its most important changes.

For almost 40 years Dr. Bush was a beloved citizen of El Paso—he died just two days before his book left the bindery. (\$3.00) LUCILE HARRIS.

Story of the Desert -- IN BOOKS

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IT TOOK 50 YEARS TO CONQUER THE APACHES

Traditional "bad men" of the Southwest were the Apaches. They were killing and robbing their Indian neighbors in the Pueblo villages long before the first Europeans appeared on American soil — and when the Spaniards carried their New World conquest into New Mexico the wild tribesmen of the desert immediately transferred their hatred to the newcomers.

Still later, in 1848 when the treaty of Guadalupe Hidalgo gave the New Mexico region to the United States—the enmity of the Apaches became an unwritten legacy. And then followed 50 years of guerilla warfare that constitute one of the blackest chapters in American history.

Charles Morgan Wood many years ago began the tremendous research task necessary to publish a completely documented record of the Apaches and their relations with Indian, Mexican and American. Wood died before his work was completed, and it remained for Frank C. Lockwood of the University of Arizona to finish the work his friend had started.

Dr. Lockwood's book *THE APACHE INDIANS*, was published last year by The MacMillan Company of New York, and is generally accepted as the most

authentic history of this time and people yet compiled.

Dr. Lockwood writes as a true historian—putting blame where the records establish that it should be placed, and giving credit where it is due. He finds there were bad Apaches and good Apaches, just as the white officials sent out from Washington to deal with them included both men of honor and scoundrels.

"Pity was a feeling unknown to the Apache, cruelty an ingrained quality," writes the author. "It must be admitted that he was never able to conceive of pains more cruel than those he suffered from his Christian enemies. The only difference between them and him was that the Apache openly confessed and practiced his creed of cruelty and rapacity, whereas the white man hypocritically professed mercy and honesty and at the same time surpassed the Apache in deeds of dishonor and blood."

For those who would become better acquainted with the characters and deeds of Cochise, Mangas Colorada, Geronimo, and the lesser chieftains on the one side, and Gen. Crook, Capt. Jeffords, Lieut. Gatewood and other Americans who played leading roles in the long warfare against the redskins, this book gives most if not all the answers. (\$3.50) R. H.

HOW TO COOL THE SUMMER TEMPERATURES

Two members of the mechanical engineering faculty at the University of Arizona, Tucson, have just completed a 30-page booklet giving detailed information for the construction and operation of evaporative air coolers now in general use in the desert area.

According to the estimates of Martin L. Thornburg and Paul M. Thornburg, authors of the book, the cost of a home-made air cooler may vary from \$10 to \$100, and the operation normally is not more than one cent an hour.

The booklets are being distributed by the Agricultural Extension service at the university.

UTAH WRITERS PREPARING HISTORICAL VOLUMES

Writers in the service of the Works Progress Administration in Utah have just completed their 23rd volume in a series of county history surveys which have been in preparation since 1935.

The current survey is a 260-page mimeographed book covering the history and administration of Tooele county and was edited by Hugh F. O'Neil, state editor-supervisor for the project.

The series when completed is to cover all of the 29 counties in the state, with an additional volume for 10 county units not now in existence.

The Desert Trading Post

Classified advertising in this section costs eight cents a word, \$1.60 minimum per issue—actually about 10 cents per thousand readers.

POINTS OF INTEREST

CATHEDRAL CITY, California: The Desert Village. A quiet place to live under the life-giving sun. See W. R. HILLERY.

BENSON'S Service Station. Headquarters for visitors to Borrego desert region. Gas, oil, water, meals, cabins, trailer space, information. On Julian-Kane Springs highway. P.O. Box 108, Westmorland, California.

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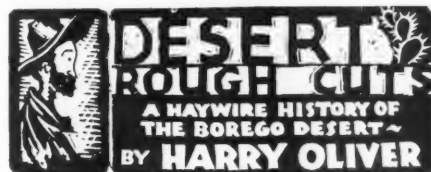
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Desert Place Names

Magazine is indebted to the research work done by the late Will C. Barnes, author of "Arizona Place Names;" to Frances Rosser Brown of New Mexico, to Margaret Hussmann of Nevada, Hugh F. O'Neil of Utah, and to James A. Jasper of Los Angeles.

ARIZONA

ANTELOPE HILL

Yuma county

An early day stage station about 50 miles east of Yuma on the old Yuma-Tucson road, south side of Gila river. Hinton's Handbook calls it Antelope peak, says: "It is a singular mass of volcanic rock whose northern side rises bold and sheer to its ragged top." J. Ross Browne in 1864 wrote, "It was called Antelope peak station, was in charge of two soldiers who had hay for supplying government teams." Poston, commenting on numbers of antelope in the vicinity, gives this poetical derivation: "We next pass peak of Antelope, Where road with river had to cope; Where once, in happy days gone by, The harmless antelope could fly To quench their thirst with Gila drink."

BEALE SPRING

Mohave county

A few miles northwest of Kingman. Named for Lieut. E. F. Beale, graduate of Annapolis, who served as a lieutenant in the U. S. Navy during the Mexican war. When he resigned from the navy at the close of the war, Beale became an explorer. Widely known is his survey for a wagon road from Fort Smith, Ark., to the Colorado river (1858-1859). He named many places in northern Arizona, died in 1893. His brother George was a member of his party in southwestern exploration. Vanished Arizona (1874): "Beale's spring did not differ from the other ranches except possibly it was even more desolate. A German lived there who must have had a knowledge of cookery, for we bought a peach pie which we ate with relish. I remember we paid him a big silver dollar for it." Hinton says the spring is an abandoned military post.

CALIFORNIA

HAVASU LAKE (hav'-a-su)

San Bernardino county

Artificial lake, formed by impounding Colorado river behind Parker dam, extends 50 miles northwesterly from the dam to a point a few miles south of Needles, California. It borders also on Yuma and Mohave counties in Arizona. Lake area about 25,000 acres. Name proposed by secretary of the interior Harold L. Ickes and John C. Page, commissioner of the bureau of reclamation, has been approved by board of geographic names. *Havas* is the Mojave Indian word for "blue." Members of the tribe attended the celebration marking completion of Parker dam. When the Indians saw the lake, their leader was astonished at its color and called it *havasu*. They had expected to see the coffee-colored water of the river, instead a clear blue lake stretched before their eyes. Parker dam is 155 miles below Boulder dam, is the diversion point for the great aqueduct of the Metropolitan Water district of Southern California. Built from the dam, across arid deserts and through rugged mountains, this artificial waterway carries one billion gallons of water daily, serving 13 cities in the metropolitan district tributary to Los Angeles.

For the historical data contained in this department the Desert

NEW MEXICO

SANTA RITA

Grant county

Named by the Spanish when Indians some time before 1700 showed them the deposit of copper here. Called by Mexicans *Santa Rita del Cobre*, Saint Rita of the Copper, when John R. Bartlett, leader of the international boundary commission, came here in 1851. For many years the Spaniards mined the native copper, about 98% pure, and carried it on pack mules and by wagon train to Mexico City. On the return trip freighters delivered supplies to Santa Rita. Small piles of Santa Rita ore may be seen today at a few places along the old trail, where a pack mule probably was killed by Indians. The mines were worked at one time by convict labor, under guard of Spanish soldiers garrisoned in a triangular fort, one corner of which is standing now. American settlers began to locate here about 1804. In 1838 Apaches captured supply trains near the camp and announced no others would be permitted to pass through their territory. Santa Rita was abandoned then until the U. S. boundary commission opened headquarters here in 1851. Since that time the copper has been worked from open pit mines. At present the prospected area covers approximately 3/4 of a mile in width and 1-3/4 miles in length. It has been worked to a depth of 600 feet.

UTAH

SOLDIERS SUMMIT

Carbon county

Named for soldiers of Albert Sidney Johnston's army. Returning to the east after the Mormon rebellion in 1858, the troops were caught in a blizzard at this point in Spanish Fork canyon and several died from exposure. Ele. 7,440 ft.

KOOSHAREM (koo-shar-omp)

Sevier county

Indian village. Name means "roots that are good to eat," is derived from wild red clover plants flourishing in the vicinity, which were cooked and eaten.

NEVADA

BOWERS MANSION

Washoe county

Sandy Bowers was a placer miner. Eilley Orrum was a laundress. They held adjoining claims at Virginia City. When the Comstock Lode was uncovered, silver catapulted them into the lap of luxury. They married, immediately built in Washoe Valley an elaborately pretentious home with many landscaped acres, swimming pools, formal gardens. In the showy house they hung crystal chandeliers, golden knobs gleamed on every door. Bowers was the only one of the Lode's original owners who cashed in a fortune. He held on to his claim while it produced richly from the bonanza near the surface, mining at minimum cost. Sandy and Eilley rode high on a fast-rising tide of quick wealth, a tide which ebbed as rapidly as it flowed to peak, left the one-time placer miner and laundress stranded, broke. When Sandy died, Eilley turned Bowers Mansion, its landscaped grounds and swimming pools, into a resort. She died a pauper, telling fortunes, herself unfortunate. For sometime the place was popular for picnics and swimming parties.

The DESERT MAGAZINE

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Mines and Mining . .

Hope springs eternal in the prospector's breast, despite official warnings that odds are badly against success for the gold seeker. Walter Bradley, chief of California's division of mines, says average earnings from hand placer mining in the state amount to less than 50 cents per day per person. "It's a tough business," says Bradley, "and in most cases it doesn't pay." Bradley invites persons interested in locating or holding mineral claims to communicate with his department, which has offices in the Ferry building, San Francisco.

Safford, Arizona . . .

Discovery of the first commercial deposit of cobalt in the United States is reported in the Turnbull mining district of the Graham mountain region west of here. Chicago lessees of 41 claims are said to have pledged immediate development to justify installation of a 50-ton mill. Cobalt is defined as a tough, lustrous, silver-white metal related to and occurring with iron and nickel. It is used as a component of certain alloy steels. Bunkhouse and messhall have been built at discovery site and work is under way to develop a water supply for the proposed mill.

Salt Lake City, Utah . . .

Sixth annual metal mining convention and exposition of the western division of American mining congress will be held here August 28-31. Prominent mining men from all parts of the west will serve on the program committee, headed by George H. Rupp of Pueblo, manager of the Colorado Fuel and Iron corporation. Fred Gray of Desert Silver, Inc., Nevada, and Joseph Walton of the Arizona copper board, are program committee state chairmen. Arizona small mine operators predict convention discussion of many problems of the small mine operators.

Winnemucca, Nevada . . .

Jumbo Extension mining corporation announces purchase of the historic Alabama gold mine from its Florida owners. The Alabama is at the east side of the Slumbering hills, has produced considerable paying ore since its discovery in 1910. Equipment includes a small mill and mine plant.

Hawthorne, Nevada . . .

Designed to treat 50 tons of ore daily, a new mill at the Junieta group of gold properties near Aurora is scheduled to begin operation in September. Under lease and purchase option from the Goldfield consolidated mines company by H. W. Evans, E. J. Neil and others, development work on these claims has been carried on during the past year. Operators say three ledges with average width of five feet have been uncovered, ore running close to \$10 per ton.

Phoenix, Arizona . . .

Thirty-one new mining operations were started in Arizona in the period between December 1, 1938 and May 30, 1939, according to report by Tom Foster, state mine inspector.

Prescott, Arizona . . .

Sale of the Monte Cristo silver mine at Constellation, 12 miles northeast of Wickensburg, transfers the property from receivership to M. B. Dudley of Kingman and Dr. N. H. Morrison of Phoenix. New owners say active operation will begin immediately. The Monte Cristo was first developed by the late Ezra Thayer of Phoenix, said to have spent several hundred thousand dollars during 16 years' development. He blocked out ore, removed none. C. C. Julian, late oil promoter, bought the property in 1926, for price reported as \$500,000 cash and \$500,000 in bonds. Julian installed mill and other machinery, but before actually operating the mine he went to China and died. Receivership followed.

Tombstone, Arizona . . .

Ore shipments from local mines maintained during June an average of one car daily. Most operators were trying to ship all available ore before the month end, as insurance against loss in case of cut in price of silver. Meantime Arizona miners joined other western operators in a campaign to advocate government fixing price for silver at a definite and permanent figure. W. J. Graham, president of the state small mine operators association says a stable price is necessary since prosperity of western mining so largely depends on silver.

Descanso, California . . .

Promotion of a custom mill to handle gold ore from San Diego county mines is proposed by Will Crosby, former director of the Julian bureau of mines. Present transport rates are so high, Crosby says, that only comparatively rich ores can be shipped profitably. Shipments from recent discoveries in Long Valley averaged \$80 a ton in returns from the Selby smelter at San Francisco and \$150 a ton from selected ore sent to Rosamond near Mojave. Minimum freight seems to be about \$10 a ton.

Daggett, California . . .

Dr. Rose L. Burcham of Alhambra has sold to Burcham Mines, Inc., H. S. Kimball of Hollywood, president, the Burcham mine in the Calico district near here. This property, known chiefly for its silver values, was first worked by Mrs. Burcham's husband, who was one of the original owners of the Yellow Aster mine of Randsburg. At one time Mrs. Burcham owned and operated the Randsburg water company, held also other interests in that camp.

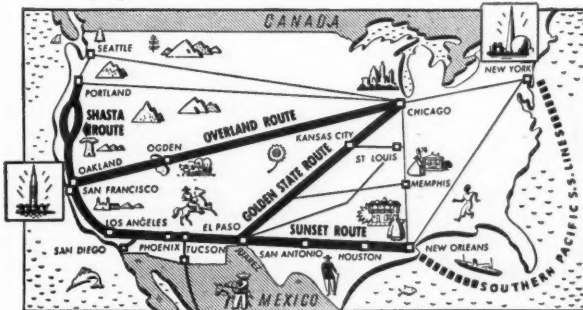
Morenci, Arizona . . .

Phelps Dodge corporation is driving ahead here with a program to spend \$27,000,000 before smelting a single pound of metal from "the largest known copper deposit in the United States." Stripping of the immense orebody is proceeding according to schedule. Four diesel locomotives will be added to equipment carrying away the overburden and dumping it to make a level spot for the new town. "Copper by 1941" is the slogan of the P-D force working on the big job.



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Southern Pacific



By RANDALL HENDERSON

BY the time this number of the Desert Magazine is off the press I will be somewhere in Arizona or New Mexico—on a vacation trip in the fascinating plateau country among the Indians and traders and park rangers—in a land of painted hills and fantastic buttes and interesting people.

This desert is too big for one person to cover. I get away from the office for a day or two occasionally and see as much of it as I can. But I am always in too much of a hurry. I have time only to say hello to folks with whom I would like to spend a whole evening, or several days. That isn't the way to travel—I miss the really important things—the heart to heart chats with real people—the beauty that can be appreciated only when one is unhurried and relaxed.

I am looking forward to the time when the Desert Magazine will have a bigger staff and I can turn more of the detail of the office over to others. Then I can load my bedroll and camera and some hardtack and beans in the car and spend days at a time in the canyons and on the mesas with companions who have not become too "civilized" to lose their sense of true values. There are many of that kind of folks in the world. I get letters from them every day—I wish I knew more of them personally.

* * *

Here are a few lines written by Louise Avery Eaton of Holtville, California, that are worth repeating:

"I've been polishing stones today. And I cannot but think how like people are these gems. Some of them appear so rough and colorless one would pass them by without a second glance—but underneath the uninviting surface there is rare hidden beauty. There are other stones that appear so fair without—and yet no amount of cutting and polishing will disclose any real worth.

"And then there are still other stones that you know at once will make perfect jewels. They radiate the beauty that is within them. They resemble humans in whose hearts are love and courage. They are of ineffable worth—life buffs them to a scintillating lustre. If the stones of our desert were to become incarnate, there would be the same variations in character that we now have in the big human family—and some of them would be just like you and me."

* * *

As a result of the opposition of certain groups in the city of San Diego, the California state park commission has withdrawn temporarily its effort to extend the Borrego desert park to include the Carrizo and Vallecito areas.

Some one has been telling the San Diego folks they were about to be robbed of a rich agricultural and mineral domain in the eastern end of their county. And since few of the San Diegans have had the hardihood to hang a canteen on

their shoulders and go out in the desert and investigate for themselves, they believed what was told them and passed resolutions accordingly.

But the greater Anza park project is not dead. Selfish private interests have opposed every state and national park project ever presented, but that has not prevented the American people from acquiring a fine system of public parks. Sooner or later the citizens of San Diego will learn the truth about the Carrizo and Vallecito desert region. Then the controversy can be settled on its merits, and that is all that the advocates of the park proposal are asking.

* * *

The Creator did not design this world as a place to be devoted exclusively to growing potatoes and fattening hogs and digging for gold. It would be a drab dull earth indeed if such had been the plan. And yet there are many men among us—unfortunately some of them in high places—who would make it just that, if they could have their way about it.

* * *

I want to pay my tribute to the memory of George P. Irish who died a few days ago in Los Angeles. He pioneered in the Palo Verde valley of California with Thomas Blythe over a half century ago. I have not seen George Irish many times in recent years—but how I enjoyed the few moments I had with him! He never acquired great material wealth—but he was rich in the things that really count—generosity, cheerfulness, loyalty, courage. I have never known a person who could live so completely apart from the petty things of life.

* * *

Yes, it is hot as blazes out on the desert now. Some days the temperature reaches 115 degrees in the shade. But the average home and office in the southwestern desert region this summer is more comfortable than in any other section of the United States. The answer is: air-coolers. Here in this region they are now regarded as a necessity, the same as a heating plant in wintertime. Nearly every one has a cooler of some type. In the so-called milder areas air-conditioning is still regarded as a luxury—and folks swelter in stuffy houses and office buildings that would be unbearable to desert dwellers. Air-conditioning has revolutionized indoor life on the desert in summertime—all within the last five years.

* * *

And now we have a law protecting desert tortoises. That is fine. But let's ask the next legislature to give us one protecting horned toads and chuckawallas—and in fact the whole lizard family. They are harmless little creatures. They've waged a courageous battle for life against terrific odds. And they've licked every foe—except man. It is not to the credit of our much touted civilization that the wild animals run for their lives every time they see a human approaching.



Grand Canyon of Arizona

BY HELEN M. PECK
Wikieup, Arizona

Mighty gulf of rose and gold,
Holding secrets ne'er to be told;
Baffling, magnetic—repellent too,
Useless are words to picture you!

Colorado cutting through,
Soul of the Canyon lives in you!
Rushing rapids that foam and tear,
Endless battle raging there.

Countless eons of storm and sun
Chiseled their way when the world was
young;
History of Earth for ages laid bare,
Ocean on ocean has billowed there!

Magic chasm, deep and wide,
Colors changing as the changing tide;
Temples, domes—untrampled sod—
Masterpiece of Almighty GOD!

• • •

HOME

BY LOIS STEINER
Phoenix, Arizona

Home! It's built upon the desert sands.

What though they shift!

Along with it

The love will drift

Into the years,

And I will still come home

To dry my tears.

And I will find that little golden glow
Radiating still.

Though shifting sands of time
May set my home upon a hill.

SUPPLICATION

BY DORIS C. PRIESTLEY
Pomona, California

The desert I would be, wrapped in a shroud,
Unsought by conquest, other worlds unknown!
Unscathed by rain or fire, relentless, proud!
Swept by the wind; remaining yet a stone!

God grant I may find peace like this, outflung!
That vast horizons find me not dismayed,
And like these tawny crags in desert sun,
Meet wind and fire and storm, still unafraid!

Photograph courtesy Fred Harvey

WINDS OF THE DESERT

BY DOVE COOPER
Seattle, Washington

Winds of the desert—bring back to me
The fragrance of sweet sand dune flowers,
With all of the freshness and sweetness
Left by the desert showers.

Bring back the sweet haunting fragrance;
Let me breathe once again the perfume,
As I fall into restful musings
Of the desert — I see now in bloom.

Oh winds of the desert — please bring me
The fragrance of sweet sand dune flowers,
With memories softly stealing—
Into the twilight hours.

CREED OF THE DESERT

BY JUNE LEMERT PAXTON

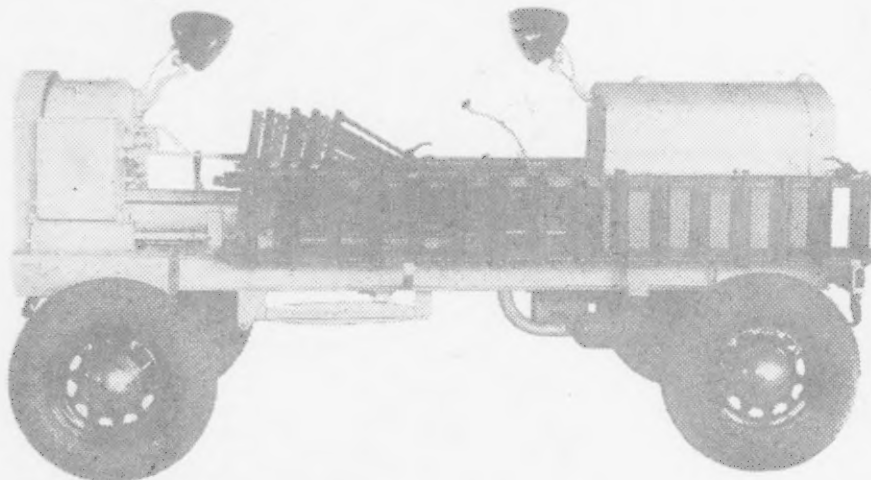
The cats-claw knows his desert lore
And always makes one-hundred
score;

With balmy days he's not misled
His winter robe to quickly shed.

Oh no, the days are warm, 'tis seen
Before he dons his coat of green.

Service Equipment on the Job!

**Don't
take a chance
on injuring
your tracks**



Part of every Tractor sale is the Service that goes with it

Any tractor will run smoothly when it is new and the bearings are tight and the gears well seated. The real test of your investment comes after months of hard usage. Then you will know whether you merely bought a tractor—or made a sound investment in a good machine plus the services of a conscientious and well-equipped dealer.

Into every "CATERPILLAR" tractor goes the finest materials and workmanship a modern factory can provide. But the "CATERPILLAR" sale does not end with a good machine. It takes service to insure a long life of smooth operation for any equipment. And that is why Ben Hulse has equipped his shops with the finest tools that money can buy. Among the special services that go with "CATERPILLAR" in this territory is the

PORTABLE "RODGERS" FACTORY BUILT PIN PRESS

The "Rodgers" press is ready for immediate call. It is designed to turn or change pins and bushings in the field, with least possible loss of time and money to you. It is equipped with a complete set of Factory service tools to handle every size of track—and manned by trained service experts. This is the only Pin Press approved by "CATERPILLAR."

For service, just call one of the Ben Hulse stores—in El Centro or Brawley, California, or Yuma, Arizona.

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SALES AND SERVICE STORES IN YUMA, ARIZONA, EL CENTRO AND BRAWLEY, CALIFORNIA

